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The Energy Crisis and Its Impact on
Tourism in Canada

by

J. Gerald Bailie, B.A.

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A thesis submitted to the Faculty of Graduate
Studies and Research, in partial fulfilment
of the requirements for the degree of Master
of Arts
in Geography

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Carleton University

Ottawa, Ontario

May 1, 1981

The undersigned recommend to the Faculty of

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May 22, 1981

ABSTRACT

This paper examines the affect of the energy crisis of the 1970's on the Canadian tourism industry. The energy crisis is subdivided into: (i) the two periods of actual supply disruptions and (ii) the adjustment period when economies and individuals attempted to adapt to higher energy costs. The tourism industry is divided into its three geographic components - demand, linkage and supply. Both aspects of the energy crisis had significant impacts on the tourism industry. The two petroleum supply disruption periods had generally beneficial effects while the adjustment period was a rather difficult time for tourism in Canada. Within the industry, the linkages - primarily the auto and airline industries - were the most adversely impacted by higher energy costs. Finally, energy conservation potential is examined in each component of the industry as a means of adjusting to continually increasing energy costs and decreasing supplies.

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Considering that Canada has yet to experience the direct effects of an energy crisis, the topic has received considerable attention on this side of the border. Some of the Canadian studies reported on the negative effects felt by the tourism industry in this country due to the two crisis incidents in the United States^{9,10} while other papers dealt with the impacts of changing global energy conditions.^{11,12} A number of research projects have employed the delphi forecasting technique attempting to make educated estimates concerning tourism evolution in Canada under different energy scenarios.^{13,14} Finally, the Canadian Government Office of Tourism has taken a particular interest in the energy/tourism topic and has sponsored a number of studies on the subject during the last decade. The culmination of their interest is manifest in a report produced by the Bureau of Management Consulting entitled Tourism and Energy.¹⁵ The study is a review of the energy situations in Canada and worldwide and the implications for the tourism industry in this country. The report is the result of a year's labour by a team of professionals who were able to obtain a high degree of co-operation which enabled easy access to some classified and privileged information. The scenarios set out in the analysis represent a range of energy futures that could be faced by the Canadian industry in the period to 1985.

Setting this thesis apart from other similar studies is its approach to the topic, the time period under review, and the scope of the energy/tourism issues examined. The last two factors necessitated the creation of the first. In terms of the approach, this paper can be looked upon as a practical application of a methodology for tourism research suggested by Lisle S. Mitchell. Mitchell's tourism

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CHAPTER 1

INTRODUCTION

The essence of the energy crisis that confronts not only the industrialized world but also the lesser developed nations, is the increasing scarcity of conventional energy resources. The era of cheap, abundant petroleum sources ended in the fall of 1973 and since then the world has had to adjust to the changed situation. The impact of the energy crisis, loosely defined as sporadic petroleum supply dislocations and increasing real prices, has been felt by all facets of society in every nation of the world.

The changing energy situation has particular importance to the tourism industry that has evolved in the developed countries of Western Europe, North America and Japan. The growth of travel and tourism, particularly at the international level, in these areas since World War II, has been generally attributed to two complementary trends - the decreasing real cost of travel and the gradual increase in disposable incomes. The energy crisis threatens to reverse these two trends to the consternation of the tourism industry.

It should be obvious that a research project examining the impact of the energy crisis on the tourism industry is not an entirely unique topic. The subject has been the focus of a number of different papers over the past decade. These studies range from the impact of gasoline shortages on the travel industry in the United States in 1974¹ and

1979;² the effects of changing energy conditions on outdoor recreation participation in Britain³ or Ontario;⁴ the impact of rising energy costs on the supply side of the industry generally,⁵ or on rural operators specifically;⁶ to the relationship between tourism and energy consumption⁷ or future energy scenarios and their possible impact on tourism in Canada.⁸

The majority of studies reviewed for this thesis are American in origin. There are two reasons for this. First, the United States has experienced two crisis periods of actual petroleum supply disruptions and increased prices during the last decade. Therefore, ample evidence has become available for the purpose of scholarly investigations. Second, the United States is the premier international market for the Canadian tourism industry and therefore changes in American travel demands are of extreme importance to the industry in this country. In addition, findings in the U.S. may prove invaluable in predicting reactions in this country to similar circumstances.

Papers examining the European energy crisis/tourism experience are fewer in number and of less relevance for Canadian researchers and industry officials. The underlying differences between the population distribution, geography and the variations in the traditional cost of energy and social history between the two continents make studies in the European context of limited value to those in Canada and the United States. It should be noted that European studies do add to the body of knowledge concerning the topic and therefore, they make an important contribution to the total understanding of the impact of the energy crisis on the tourism industry.

Considering that Canada has yet to experience the direct effects of an energy crisis, the topic has received considerable attention on this side of the border. Some of the Canadian studies reported on the negative effects felt by the tourism industry in this country due to the two crisis incidents in the United States^{9,10} while other papers dealt with the impacts of changing global energy conditions.^{11,12} A number of research projects have employed the delphi forecasting technique attempting to make educated estimates concerning tourism evolution in Canada under different energy scenarios.^{13,14} Finally, the Canadian Government Office of Tourism has taken a particular interest in the energy/tourism topic and has sponsored a number of studies on the subject during the last decade. The culmination of their interest is manifest in a report produced by the Bureau of Management Consulting entitled Tourism and Energy.¹⁵ The study is a review of the energy situations in Canada and worldwide and the implications for the tourism industry in this country. The report is the result of a year's labour by a team of professionals who were able to obtain a high degree of co-operation which enabled easy access to some classified and privileged information. The scenarios set out in the analysis represent a range of energy futures that could be faced by the Canadian industry in the period to 1985.

Setting this thesis apart from other similar studies is its approach to the topic, the time period under review, and the scope of the energy/tourism issues examined. The last two factors necessitated the creation of the first. In terms of the approach, this paper can be looked upon as a practical application of a methodology for tourism research suggested by Lisle S. Mitchell. Mitchell's tourism

research frame-of-reference links three geographic spatial components - demand, linkage and supply - and a trichotomy that pertains to the ideas of purpose, structure and distribution.¹⁶ Purpose is defined as "...to include an understanding of the reasons why an individual or group is interested in participating in a specific tourist experience."¹⁷ The purpose leads to a tourism system structure which consists of two parts: stratification and categorization. Finally, the distribution of tourist phenomena directly reflects the purpose and structure.¹⁸ In summary, the location of a tourist site is directly determined by its purpose and the resulting structure; the concepts of purpose, structure and distribution are inexplicably interlinked and interrelated.¹⁹

The two energy crises of the last decade dramatically altered the structure of much of the tourism industry. Since the concepts of purpose, structure and distribution are so closely related, the crises' effects on the structure have important repercussions on both the purpose (values) and the distribution (physical geometry) of the industry. By utilizing a matrix, based on Mitchell's frame-of-reference, the crises' impacts can be observed on the organization of the institutions, facilities and attractions of the demand, linkage and supply components of tourism in Canada. As Mitchell points out, any examination of demand/linkage/supply "...may make discoveries which are directly relevant to behavioural science, economics and geography."²⁰ By using an adapted model of this tourism research frame-of-reference, a holistic approach can be utilized to analyze the impact of the energy crisis on the tourism industry in Canada during the 1970's.

This paper also differs from previous work in that the timeframe under study comprises nearly the entire decade of the seventies. The extended period under examination permits the energy crisis to be divided into two segments: (i) the two periods of actual supply dislocations and increased costs, and (ii) the intermediate years (1975-78) when Western countries and individuals attempted to adjust to the altered energy environment. A disaggregation in this way permits an analysis of the various impacts associated with each segment of the energy crisis, as well as a comparison of the two crisis incidents of 1974 and '79. By examining the demand, linkage and supply components of the Canadian tourism industry in relation to the two segments of the energy crisis, a more complete understanding of the phenomenon should be obtained. The nature of such a study demands that a multidisciplinary approach be taken. The arguments cross historical, geographical, sociological, managerial and even political fields since there is a great deal more to travel and tourism than merely economics.

The study of tourism lends itself to geographic analysis because it is variably distributed in space and time. There is scarcely an aspect of recreational travel and tourism in which a geographical perspective is not relevant. The activity as a commercial entity relates to economic geography as do locational facets of the phenomenon. The mobility element of tourism is of interest to transportation geographers. Historical and cultural geography play an important role in this study of energy and tourism, particularly because of the extended time frame employed in the analysis. Geographical interpretation of tourism has become so extensive in recent years that the subject is now considered as an independent field of the discipline.

Due to the nature of the subject examined and the approach taken in the study, two main research objectives are established. The first objective involves an extensive analysis of the energy crisis phenomenon itself. The length of time under study and the division of the energy crisis into two distinct parts requires that a detailed, historical account be provided of the evolving energy environment of the 1970's. The two crucial characteristics of any diminishing resource - supply and price - are examined on a national and international scale in the present and near future. It is also imperative that the bonds between the evolving fuel situation and economic developments be clearly established. It is the economy that is the direct link between the energy crisis and tourism. Finally, the aspect of increasing gasoline prices, a topic that has received considerable attention, is evaluated separately because of its function in the elasticity of travel demand. The first objective provides the background and framework necessary for a successful understanding of the impacts of changing energy conditions on tourism in Canada.

The second objective - the documentation of these impacts - can be stated succinctly in two hypotheses. First, it is hypothesized that the two stages of the energy crisis (the critical periods and the adjustment years) will have a different set of effects on the tourism industry. The use of the matrix assists the examination of the energy crisis on the demand, linkage and supply components of tourism in isolation and in relation to each other. Second, it is hypothesized that the petroleum

supply and price situation has in fact been the most pervasive development of the last decade, permeating every aspect of the tourism industry in this country. This trend occurred at a time when Canada had relatively abundant energy resources and could afford to maintain lower petroleum prices compared to other industrialized nations. The relationships between energy and tourism are numerous and complex. They also deserve more attention than they have received in the past.

The research takes the form of a "desk analysis" which accumulates, organizes, evaluates and synthesizes data from a large number of sources. The traffic volumes are studied by time series analysis, spatial and modal variation and route location. The traveller characteristics, such as length of stay, origin, destination, expenditures, and purpose of trip, obtained from frontier surveys, are also analyzed temporally and geographically. The household and interview surveys provide information on the socio-economic characteristics of the travellers enabling the impact of the energy crisis to be identified with specific segments of the travel market. Data on the linkage and supply elements of the industry are examined to identify the effects of the changing energy environment on these components.

A secondary objective of this paper is to take advantage of material and data readily available in the public domain. My position as researcher at the International Travel Section of Statistics Canada has provided me with a privileged view of the national and international tourism industry, a familiarity with numerous sources of information and

associations with experts and professionals in the field. It has been said that the tourism industry lacks sufficient data for efficient, far-sighted management and planning. My experience leads me to believe the opposite is true. There is ample data available on a local, national or international scale. The material may be specific or localized in nature but a large amount does exist and the unifying themes need only to be identified.

The databank on travel and tourism includes not only a number of specific surveys on the subject but also material such as the Consumer Price Index, Travel Price Index, income and the unemployment rates which have direct and indirect impacts on vacation travel. A list of the major sources of information follows:

- i) Domestic travel patterns are available from the Canadian Travel Survey, a household-interview survey undertaken by Statistics Canada, and Vacation Travel Patterns by Canadians, an annual telephone survey conducted by Traveldata International of Toronto and sponsored by the Canadian Government Office of Tourism.
- ii) Estimates of international travel demand will be obtained from the Travel Between Canada and Other Countries annual produced by the International Travel Section of Statistics Canada. Appropriate foreign data will be obtained from the Organization of Economic Co-operation and Development, World Tourism Organization and United States Travel Service publications.

iii) Material on the supply component of the industry is available from hotel/motel occupancy rates, restaurant and recreational facilities sales figures and Provincial Park statistics.

iv) Reports, government and private, on the short and long-term supply, production and consumption estimates for Canada and the world will be examined. Published theoretical reports and articles on increased gasoline costs and vacation patterns as well as other reports on specific aspects of tourism and energy are reviewed. Finally, related newspaper and magazine articles from various sources will be used to supplement and keep the research current.

As with any piece of research, this endeavour is plagued by a number of constraints. First, many of the variables under review are in a constant state of flux. Aspects such as the international and Canadian petroleum supply/demand situation, developments in the automobile and airline industries, as well as the general economic evolution all underwent dramatic changes while this paper was being planned, researched and written. For example, as the chapter on the present international petroleum markets was being written, Iraq declared war on Iran and initiated a conflict that has lasted over half a year.

To some, a second constraint may be the fact that Canada has been fortunate to avoid the direct negative aspects of the energy crises of the 1970's. The fact that Canada has not been subject to gasoline lineups and dramatically increased prices does not undermine the value of this research topic. Canada's main international travel market - the

United States - has been hit hard by both crises, with detrimental effects spilling over to this country. In addition, domestic conventional petroleum production is declining, with the result that Canada is becoming more dependent on unstable and expensive foreign sources, increasing the potential for a future fuel crisis occurring in this country.

This paper is organized in the following format. Chapter One outlines the goals, objectives and hypotheses of this research and introduces the topics to be covered. Chapter Two is a description of the energy crisis phenomenon through a historical overview of its evolution. Events leading up to the two crisis incidents of the last decade are detailed to provide a temporal frame-of-reference for the study. The aspects of supply and price are examined as they represent the critical issues for consumers. The energy crises have had a number of measurable impacts on the economies of the world. These impacts will be identified since they represent the link between the energy crisis and tourism. Finally, the relationship between increased gasoline prices and travel demand is analyzed. This question is of vital importance to the travel industry due to its large dependence on the automobile trade.

Chapter Three, utilizing the energy crisis/tourism industry matrix, examines the crises' impacts on the demand, linkage and supply components of the Canadian industry. The analysis is structured to identify the different set of impacts associated with the two aspects of the energy crisis. The matrix facilitates the study in that each cell can be examined both in isolation and in relation to the others in the array.

A related aspect of the energy crisis is conservation, as a means of decreasing fuel consumption and therefore reducing costs. Chapter Four looks at present and potential conservation behaviour as it applies to the three components of the tourism industry - demand, linkage and supply. In the extreme case scenario, petroleum allocation and rationing is regarded as a necessary policy option. Due to the potential consequences of this action on the tourism industry, the topic warrants special attention.

Summary and concluding remarks are presented in Chapter Five followed by an extensive bibliography. Footnotes are listed at the end of each chapter as are tables too large to be placed in the text.

FOOTNOTES FOR CHAPTER 1

Introduction

- (1) S. Levin, "Travelling the U.S. - Effects of the Oil Crisis", Canadian Business, July 1974, pp. 36, 37, and 44.
- (2) United States Travel Service, The Impact of the 1979 Gasoline Shortage on the U.S. Travel Industry, Washington, May 1980, pp. 1-25.
- (3) Brian S. Duffield, The Effects of Changing Energy Conditions on Outdoor Recreation Participation - The British Perspective, paper delivered at A.A.G., Louisville, Kentucky, April 1980, pp. 1-15.
- (4) Peter Klopchic, Implications of the Energy Shortage on Tourism and Outdoor Recreation in Ontario, Toronto, Ontario Ministry of Industry and Tourism, January 1974, pp. 1-27.
- (5) J.D. Barry, Tourism and Energy, Overview and Recommendations, Ottawa, Tourism Industry Association of Canada, February 1980, pp. 1-11.
- (6) Ontario Ministry of Treasury and Economics, The Effect of Rising Energy Prices on Tourist Operators in Rural Ontario, Economic Development Branch, January 1980, pp. 1-12.
- (7) Earl R. Kruschke, Tourism and Energy Consumption, paper presented to the American Anthropological Assoc., Mexico City, November 1974, pp. 1-16.
- (8) Bureau of Management Consulting, Energy and Tourism, Ottawa, Supply and Services Canada, sponsored by the Canadian Government Office of Tourism, Industry, Trade and Commerce, May 1980 (Draft) pp. 1-251.
- (9) M. Donnelly and J. Latham, "Energy and Tourism: What Happened in '74", Recreation Review, Vol. 4, No. 3, August 1975, pp. 7-22.
- (10) Options '80, Tourism and the Energy Crisis, The Atlantic Insight Conference Series, 4-7 November 1979, (summary program) pp. 1-24.

- (11) L.M. Thur, Canadian Energy Supplies in the 1980's and the Consequences for Tourism, Atlantic Insight Conference "Tourism and the Energy Crisis", November 1979, pp. 1-19.
- (12) J. Frank Roberts, "The Energy Crisis' Effect on Tourism", Canadian Travel Courier, January 10, 1980, p. 7.
- (13) L. D'Amore, Tourism in Canada - 1986, A Delphi Survey conducted for the Canadian Government Office of Tourism, Montreal, October 1976, pp. 1-108.
- (14) R.W. Butler and G. Stankey, 1979 Delphi Investigation of Impacts of Changing Energy Conditions in Outdoor Recreation and Tourism, London, University of Western Ontario, 1980, (unpublished).
- (15) Bureau of Management Consulting, Energy and Tourism, pp. 1-251.
- (16) Lisle S. Mitchell, "The Geography of Tourism An Introduction", Annals of Tourism Research, July/Sept. 1979, p. 238.
- (17) Ibid.
- (18) Lisle S. Mitchell, "The Geographer's Contribution to Tourism Research", The Travel Research Association 10th Annual Conference Proceedings, San Antonio, October 1979, p. 326.
- (19) Lisle S. Mitchell, "The Geography of Tourism An Introduction", p. 239.
- (20) Lisle S. Mitchell, The Geographer's Contribution to Tourism Research, The Travel Research Association, San Antonio, Texas, 2 June, 1979, p. 6.

CHAPTER 2

THE ENERGY CRISIS PHENOMENON

In order to understand the energy crisis and its impact on the Canadian tourism industry in the last decade, it is necessary to examine the many aspects of the phenomenon. The events of the 1970's must be placed in a historical perspective (Section 2.1) which is accomplished by reviewing the international oil market, the evolution of the Organization of Petroleum Exporting Countries (OPEC) and the two energy crisis incidents that occurred during the seventies. The critical issues of an energy crisis - supply and price - must be analyzed on both a domestic and international scale (Section 2.2). Canada's domestic petroleum production, consumption, exports and imports must be placed in the context of the international oil market. The history of energy pricing policies in Canada and around the world and the projected real price increases in the coming decade are bound to have significant ramifications on industry, consumers and the governments of the developed world. Changes in net supply and price conditions have had serious impacts on the economies of the industrialized world (Section 2.3). The most obvious effects were the periods of increased inflation and decreased aggregate demand which followed each energy shock. Finally, the most visible and personal aspect of the energy crisis - increasing gasoline prices - must be examined on a historical and international level (Section 2.4). Numerous papers have presented the findings of theoretical studies in an attempt to understand the relationship between increased price and

demand. Only by differentiating between nominal and real price increases can an accurate elasticity of demand be calculated.

Chapter 2 documents the multi-faceted nature of the energy crisis phenomenon. An examination of its varied components spans the disciplines of geography, history, economics and political science. As common and as well known as the term energy crisis has become, its obvious simplicity masks the complex nature of the subject.

2.1 The Evolution of the Energy Crisis

After World War II, control of the world oil market was held by a small number of very large international companies. As a consequence of political, economical and geographical relationships, the oil industry had been strongly motivated to concentrate its attentions in the Persian Gulf region. The combination of the very abundant nature of the oil reserves in the Middle East, their extremely low cost of production, and until recently, the low incidence of taxation meant that these energy reserves were preferred over all others for meeting the needs of the rapidly growing global markets of the 1950's and 1960's.

By 1960, the international oil companies were facing lower profit margins and the industry decided to reduce their tax commitments to the producing countries and affect the posted price of oil. In response, Iraq invited the five other major oil exporting nations to a conference in Baghdad on September 9, 1960. It was at this meeting that the Organization of Petroleum Exporting Countries was formed. The

The oil workers of Iran played a key role as part of a series of nation-wide strikes that resulted in the downfall of the Shah's government. The petroleum workers cut oil production in October 1978 which led to a fall in exports from 5.3 million barrels a day (mb/d) to 1.5 mb/d, costing the Shah about \$U.S. 50 million a day in lost revenue. The loss of approximately 4 mb/d on the export market turned a small surplus in world oil production into a shortage. The missing millions of barrels per day were eventually accounted for by increasing production from Saudi Arabia and extra buying on the non-contract spot market. The result was that crude oil prices sky rocketed in those months of a very tight oil market. Prices for Arabian light petroleum rose from \$(U.S.) 12.63 in the fourth quarter 1978 (4Q78) to \$(U.S.) 24.00 in 4Q79, and finally \$(U.S.) 28.00 by the second quarter of 1980. When the new Iranian government finally re-entered the world oil market in March of 1979, other countries cut petroleum production to maintain the tight market conditions and increased prices. (Saudi Arabia, however, did not reduce their production immediately and this decision, coupled with the international recession of 1980 resulted in the present, although temporary, "glut" of oil.)

The beginnings of the last decade were characterized by a stable world oil market and declining real prices. This situation, however, ended abruptly in October 1973. The year 1974 was a period of dramatic real price increases for petroleum products and tight market conditions. From 1975 to late 1978, the international oil market maintained

further aggravated by the occasional political closure of the Trans - Arabian pipeline linking Ras Tanura, Saudi Arabia, on the Persian Gulf to Sidon, Lebanon on the Mediterranean Sea² and a decline in domestic oil production in the United States.³

Throughout this short history of oil exploration and production, the total quantity of these finite reserves has in fact been declining. With increasing scarcity, the price of energy should have been rising relative to other prices. "In fact, the real price of energy (the price corrected for inflation) fell almost without interruption from the 1920's to 1973."⁴ This situation was due to the oligopolistic nature of the market place and the continued expansion of relatively cheap sources of supply. This trend of declining real prices resulted in petroleum products becoming the foundation for the expansion of western industrial technology and, in effect, global development.

On October 6, 1973, Egypt attacked the Israeli forces along the Suez Canal and eleven days later the Arab oil ministers met in Kuwait to respond to this situation. It was at this meeting that OPEC decided to use oil as an economic and political weapon during the Arab - Israeli War. They announced an immediate increase in crude oil prices from the level at that time of about \$US 2.00 a barrel. On October 21, the Arab oil producers imposed an embargo on the United States and the Netherlands and implemented a reduction in total petroleum production. Although the embargo lasted only until March 1974, it resulted in a permanent quadrupling of OPEC crude oil prices and imposed a psychological shock that focused the world's attention on the energy crisis.

Between 1975 and late 1978, conditions produced a stable world oil market. The demand for OPEC oil dipped temporarily due to slow economic growth during 1975, a build up of production in the North Sea and Alaska and attempts at conservation in the world. Thus, OPEC production in 1978 was only slightly higher than in 1974 and prices had only increased in nominal terms.⁵ Conditions were not "back to normal" during this time, however, as countries had to deal with higher energy costs in both economic and social terms with their success reflected in inflation, unemployment, balance of payments and exchange rate statistics. The energy crisis was as much a part of this period as the 73/74 and imminent 78/79 periods.

By 1978, the world was becoming complacent about the international oil supply/demand balance and even optimistic about future prospects. Prices had decreased in real terms over the last few years and predictions of a "glut" of oil were given wide publicity. During this period, as well as importing increasing quantities of Iranian oil, the United States relied on the Shah to be a stable factor in the volatile Middle East. To this end, as well as in lieu of payments for imported oil, the United States supplied the Shah with an army second to none in the area and the technicians to run it. The American presence, the oppressive rule of the Shah, his push to "westernize" as well as long-festered religious dissent all contributed to the eventual exile of the Shah on January 16, 1979.

The oil workers of Iran played a key role as part of a series of nation-wide strikes that resulted in the downfall of the Shah's government. The petroleum workers cut oil production in October 1978 which led to a fall in exports from 5.3 million barrels a day (mb/d) to 1.5 mb/d, costing the Shah about \$U.S. 50 million a day in lost revenue. The loss of approximately 4 mb/d on the export market turned a small surplus in world oil production into a shortage. The missing millions of barrels per day were eventually accounted for by increasing production from Saudi Arabia and extra buying on the non-contract spot market. The result was that crude oil prices sky rocketed in those months of a very tight oil market. Prices for Arabian light petroleum rose from \$(U.S.) 12.63 in the fourth quarter 1978 (4Q78) to \$(U.S.) 24.00 in 4Q79, and finally \$(U.S.) 28.00 by the second quarter of 1980. When the new Iranian government finally re-entered the world oil market in March of 1979, other countries cut petroleum production to maintain the tight market conditions and increased prices. (Saudi Arabia, however, did not reduce their production immediately and this decision, coupled with the international recession of 1980 resulted in the present, although temporary, "glut" of oil.)

The beginnings of the last decade were characterized by a stable world oil market and declining real prices. This situation, however, ended abruptly in October 1973. The year 1974 was a period of dramatic real price increases for petroleum products and tight market conditions. From 1975 to late 1978, the international oil market maintained

a fairly stable balance while prices only rose in nominal terms. In the fall of 1978, political unrest in Iran produced a second chaotic period of reduced supplies and increased real prices, which lasted through half of 1979. The new decade, 1980, began plagued with many of the same economic problems which previously occurred in 1975 - the beginning of the first energy crisis adjustment period.

It is generally recognized that the energy crisis became part of the world's consciousness, economy, politics and society in October 1973 and has been with us ever since. The energy crisis of 1973/74 has become the watershed between the "big-is-beautiful" society of the sixties and the "limits-to-growth" world of the seventies. For the purposes of this examination, the energy crisis is divided into two distinct periods. The first is the relatively short-term crisis periods of actual petroleum supply disruptions and dramatic price increases, of which there have been two (4Q73-4Q74 and 4Q78-4Q79). The impacts of these two events on the economy in general and more specifically the tourism industry were abrupt and dramatic. The second period, 1Q75 to 3Q78, was a time when the world's economies and societies attempted to adjust to increased energy costs. The energy crisis psychology which dominates this period appears to have impacted on the economy and tourism in more gradual and subtle ways.

Although the two short-term crisis periods occurred five years apart they exhibited a number of similar characteristics, other than being times of supply reductions and increased real prices. First, both events were the result of deliberate political decisions. The embargo

distinct possibility. At the same time, Canada's domestic conventional sources of petroleum are depleting, forcing Canada to be more dependent on an unstable world market. A study by the Province of Nova Scotia concluded that only an abrupt change in policies and consumption patterns can alter these established trends as voluntary conservation will not be sufficient.²¹

The behaviour of petroleum prices, in times of an energy crisis caused by decreased supply, follow basic microeconomic market place theory. Decreased supply combined with continued demand produce rising prices. This sequence of events resulted in petroleum prices quadrupling between 1973 and 1975 and tripling again between late 1978 and 1980.

Historical pricing policies in the international oil market demonstrate that petroleum has been traditionally undervalued. The low costs of production in the reserve areas (primarily the Persian Gulf) and the oligopolistic nature of the market place resulted in petroleum being priced at ridiculously low levels. From 1970 to 1973, a barrel of Saudi Arabian light crude was priced at about \$(US) 2.00 a barrel. The increase in late 1973 pushed the price up to \$(US) 8.00 and the most recent increases resulted in prices reaching \$(US) 28.00 by the middle of 1980. The present price for Canadian petroleum, which is approximately one half the world level, is incredibly inexpensive in relation to equivalent amounts of other liquids. For example, at 28 cents a litre, gasoline is 40 cents less than milk, 64 cents less than orange juice, \$3.85 less than Canadian wine, and \$11.62 less than whiskey.²²

the chance of future petroleum production disruptions in this area is a definite possibility. As this paper was being written, Iraq attacked Iran resulting in another cut in petroleum production from this area.

2.2 Supply and Price: The Critical Issues

The energy crisis is the result of developments in the supply and price components of the world's available petroleum resources. In the last decade, crisis situations were the consequence of individual political decisions by a selected group of countries. During the present decade, forecasters warn that energy crisis conditions may occur again, however, this time they may be due to more serious finite resource limitations. The critical issues of supply and price have important ramifications for tourism in Canada.

This section will outline the petroleum supply and price situations at present and short-term forecasts to 1985 for the world and Canada. Due to the projected scenarios for domestic and international supply, it is extremely important to evaluate Canada's domestic petroleum production, consumption, exports and imports in the context of the international market. If present trends continue, it is expected that Canada will become more reliant on an increasingly unstable international oil market - an alarming prospect for Canada's economy and tourism industry. Historically, the low price of energy (mainly in the form of petroleum) has had profound implications on the structure of industry, transportation and society in general in the developed world.

Even within the industrialized world, the difference in the cost of energy between North America and Western Europe/Japan has resulted in the evolution of distinctive demand patterns for energy between these two regions. The forecasted increases in the real price of petroleum in the world and especially in Canada, are bound to have significant impacts on industry, consumers and governments.

A review of the present petroleum supply and demand situation for the world and Canada illustrates the fine line between a surplus or deficit in the market. World oil consumption in the non-Communist world, is presently around 50 million barrels a day and has been growing by about 2-3 percent during the last decade. The following table graphically illustrates the lopsided split between production and consumption between the OPEC nations and the rest of the world. The centrally planned economies are excluded from the figures because this area of the world is self-sufficient and isolated, for the moment, from the petroleum market (Table 2.1).

Table 2.1 World Petroleum Production and Consumption - 1979⁸

	Production(%)	Consumption(%)
OPEC	63	5
Rest of the World	37	95

Source: Petroleum Economist, August 1980, pp. 342 and 348.

The Middle East supplies one third of United States' imports, two thirds of Western European oil and three quarters of Japan's petroleum needs. Up to 70% of the non-Communist world's oil supply is moved by supertanker through the 39 kilometer (24 mile) wide Strait of Hormuz between Iran and Oman.⁹ A blockade of this narrow strait would virtually halt crude shipments from such major exporters as Saudi Arabia, Kuwait and the United Arab Emirates. Therefore, not only is the global oil market in a precarious position between supply and demand, but its production and distribution originates from one of the world's most vulnerable areas.

When world oil prices rose in late 1973, Canada was in the unique position of being one of the few industrialized countries that was virtually self-sufficient in oil. Even then, however, due to the location of the petroleum resources and markets, it has been the policy to import oil for Canadian consumers east of the Ottawa Valley. The eastern imports were paid for by western exports of petroleum and natural gas to the United States. This policy worked well when exports were greater than imports and domestic and international prices were similar.

Today neither condition exists. In 1978, Canada's gross imports of 667,000 barrels per day were partly offset by exporting 396,000 barrels per day of crude oil and petroleum products. The result was a net import of 15% of Canadian domestic oil consumption.¹⁰ This figure hides the fact that Canada's endowment of energy resources is not evenly distributed and the imbalances between production and consumption are

much more pronounced at the regional than at the national level. In general, Western Canada is a net exporter of energy (especially oil, gas and coal) while Eastern Canada (including Manitoba) is a net overall importer. There are particular commodity exceptions to this generalization, such as hydro electricity, which is relatively abundant in Newfoundland, Québec, Manitoba and British Columbia. On a per capita basis, energy demands vary considerably from region to region, even after taking account of differences in provincial income levels. Reasons for this variation include the historical price differences, industrial structure and heating requirements among regions.¹¹

Although the present supply/demand situation is relevant, ultimately a more important factor is the projected short-term production/consumption scenarios. Although, the art of forecasting is wrought with pitfalls, there is no lack of studies. A recent International Energy Agency monograph analyzed 73 studies undertaken between 1969 and 1979 that projected different energy demands to 1985.¹² Each forecast arrived at a different series of estimates based on various sets of debatable assumptions, demand estimates and delivery schedules. Short-term forecasts to 1985 for Canada from government, industry and consumer agencies differ to some extent on the actual numbers, but the projected trends are not significantly divergent.¹³

Estimates derived by the Department of Energy, Mines and Resources (EMR) show a life expectancy for current reserves at present levels of production of ten years for conventional oil and 22 years for natural gas. Oil sands and heavy oils form a much larger reserves base, but

there are major noneconomic constraints on the rate of their development. By 1985, Energy Mines and Resources estimate that domestic crude oil production will fall from 1.7 mb/d to 1.5 mb/d even as consumption increases so that the difference must be imported from the world market.¹⁴ Imperial Oil states that it is inevitable that domestic production will decline in the short-run. The conventional oil fields in Alberta are in a relatively advanced state of depletion.¹⁵ Decreasing domestic production will mean that, by 1985, part of Ontario and Québec's oil needs and that of the Atlantic Provinces will have to be met totally by imports from unreliable sources at world prices. The scenarios that have been developed suggest that Canada's medium-term supply/demand situation for energy poses serious potential problems, that could adversely affect Canadian living standards.¹⁶

Frontier oil from such remote and difficult off-shore fields as the Beaufort Sea, the high Arctic, "Iceberg Alley" off Labrador or under-sea wells off the Atlantic coast is still a distant hope. Present technology indicates that long lead times are required to bring these major new oil sources into commercial production and, therefore, should not be expected until the late 1980's. Further, construction of facilities to bring future oil and gas to market would be carried out at a time when other multi-billion dollar projects such as oil sands plants and the Alaska Gas Pipeline System would be creating strains on the supplies of manpower, materials and capital. The Royal Bank of Canada estimates that over the next 20 years "...roughly \$1.5 trillion of new energy investment capital will be needed to develop Canada's conventional and non-conventional and frontier sources of energy supply."¹⁷

In the short-run, these studies predict that Canada will have to import more oil to augment depleting domestic production. Therefore, it appears unlikely that Canada will be able to keep its commitment made at the 1979 Tokyo Summit of holding imports to 600,000 b/d in 1985. It has been estimated that the cost of imports at that time could be between \$5 billion and \$7 billion depending on the volumes and prices involved,¹⁸ if supplies are available on the international market at all.

The prospect of increased dependence on the world petroleum market in the next decade is risky in light of forecasted international supply/demand scenarios. On an international scale the elements that must be considered include the predicted economic growth of the developed and lesser developed world, the production capacities of the non-OPEC nations and, in particular, the role Saudi Arabia might play in the future given its abundant reserves. One study concludes that "...the tables calculated on a conservative basis portend in the clearest terms a major world oil crisis in the early mid-1980s."¹⁹

From the foregoing discussion, it is clear that oil supplies both in Canada and the world will remain tight and uncertain throughout the next decade. The difference between the forecasted oil shortage and those of 1973-74 and 1979 is that the forecasted shortages will be due to real limits of installed productive capacity and not the decisions of OPEC nations to limit output for political reasons.²⁰ In October 1973, the world entered a new petroleum era of tight market conditions. The forecasts for the 1980's suggest a continuation of this situation such that periodic short-term supply disruptions at the global level remain a

distinct possibility. At the same time, Canada's domestic conventional sources of petroleum are depleting, forcing Canada to be more dependent on an unstable world market. A study by the Province of Nova Scotia concluded that only an abrupt change in policies and consumption patterns can alter these established trends as voluntary conservation will not be sufficient.²¹

The behaviour of petroleum prices, in times of an energy crisis caused by decreased supply, follow basic microeconomic market place theory. Decreased supply combined with continued demand produce rising prices. This sequence of events resulted in petroleum prices quadrupling between 1973 and 1975 and tripling again between late 1978 and 1980.

Historical pricing policies in the international oil market demonstrate that petroleum has been traditionally undervalued. The low costs of production in the reserve areas (primarily the Persian Gulf) and the oligopolistic nature of the market place resulted in petroleum being priced at ridiculously low levels. From 1970 to 1973, a barrel of Saudi Arabian light crude was priced at about \$(US) 2.00 a barrel. The increase in late 1973 pushed the price up to \$(US) 8.00 and the most recent increases resulted in prices reaching \$(US) 28.00 by the middle of 1980. The present price for Canadian petroleum, which is approximately one half the world level, is incredibly inexpensive in relation to equivalent amounts of other liquids. For example, at 28 cents a litre, gasoline is 40 cents less than milk, 64 cents less than orange juice, \$3.85 less than Canadian wine, and \$11.62 less than whiskey.²²

The absolute or relative price or cost of a commodity or service is deemed important since it places an economic value on the item involved. A cheap price translates into a low perceived value in the market place and implies a worthlessness or lack of importance or utility to the possessor. Cost has important implications on how the item is produced, transported and consumed. Since industry and consumers aim at increasing profits or savings, respectively, they tend to maximize the utilization of the cheapest elements - in this case, petroleum.

This trend is evident in the economic evolution of the developed world over the last three decades. From World War II to 1973, a slow and steady shift occurred among the inputs of industrial production in the advanced economies of the world, due to the decline of the real cost of energy. During this period two factors of production - namely energy and capital - were significantly cheaper in real terms relative to the third important factor of production - labour. The shift in the relative prices of these three components occurred for a number of reasons. Firstly, the reserves of energy resources and energy production were continually increasing world-wide, thus driving down the real cost of energy. Secondly tax policies designed to spur economic expansion helped to reduce the growth in the price of capital services. Finally, tax and social welfare policies combined with greater wage demands tended to increase the cost of the labour services for production. The shift away from labour toward energy and capital served to exacerbate the impact of the increases in energy prices that were brought about by the OPEC cartel.²³

Even within the developed world, the historical difference in energy prices between North America and Western Europe/Japan have resulted in the evolution of distinct energy demand patterns. The difference in the price of energy between the two regions is due to the distribution of world-wide petroleum resources. Western Europe and Japan are deficient in domestic petroleum resources and production. Therefore, they are almost totally dependent on the international oil market. North America, on the other hand, up to the early seventies was virtually self-sufficient in petroleum due to abundant resources and production. Therefore, petroleum prices in North America were set at such a level as to support the domestic industry. In fact, for domestic petroleum industries to develop both the United States and Canada had to secure a market in their own country in order to maintain the industry which, at that time, could only produce a more expensive product than was available on the world market.

The historical difference in the price of energy (petroleum) in North America and Western Europe/Japan has resulted in distinct patterns of demand evolving in the two areas. By whatever standard is used, energy demand and consumption in North America is much higher than in Western Europe or Japan. Four European countries (United Kingdom, Netherlands, France and West Germany) all have energy/output ratios well below those of the United States and Canada.²⁴ Royal Bank figures (Table 2.2) indicate that between 1963 and 1978 domestic output as a function of energy consumed has increased by 25% in the U.K., 12% in Japan and 10% in West Germany. These countries have adjusted to world

prices in their patterns of energy consumption. In the United States which has not yet fully adjusted, energy efficiency rose by a narrow 2.3% since 1963. In Canada, where little attempt has been made to adjust to world prices, output per unit of energy used actually declined by 5.3% over this period.

Table 2.2

Energy Efficiency²⁵

Dollars of Output per BTU's Consumed

	<u>1963</u>	<u>1978</u>
West Germany	1,558	1,718
Japan	1,492	1,669
United Kingdom	940	954
United States	932	954
Canada	887	840

Source: D.G. Waddingham, Financing Canadian Energy Projects, September, 1980, Table 4, p. 19.

It must be recognized that energy use in any country is determined by a number of conditions other than price. These factors include climate, geography, population density, the components of the Gross National Product (GNP), the prices of the other factors of production (capital and labour), exchange rates, the volume of international trade and numerous technological factors.²⁶ The significantly different lifestyles across countries results in different demands for energy, but tastes and habits may themselves be functions of price.²⁷

To understand the essential differences in energy demand between countries it is necessary to examine this demand sectorally. In terms of energy demand, the transportation sector is of vital importance to the tourism industry. In a study for the Canadian Energy Research Institute, Slagorsky undertook a detailed sectoral analysis of energy use in Canada (and the United States) in comparison with other countries (mainly Western Europe and Japan).²⁸ Slagorsky's work supports the accepted hypothesis that the transportation sectors of both the United States and Canada are characterized by a higher usage of energy than their counterparts in Japan or Western Europe. In total, road travel accounts for a high and more or less uniform percentage of transportation energy consumption in all countries considered. Slightly more variations were encountered in rail travel and even more in air transport. Air travel, particularly in terms of passenger travel, is used much more extensively in Canada and the United States than all other countries examined. Rail transport accounts for only a small amount of total energy consumed in the transportation sectors. Canada was found to be the lowest for the number of nationals travelling by rail but leads in terms of freight moved. Auto travel in both North American countries uses substantially more energy to generate a given number of car-kilometers a year than in any of the other countries. It is in passenger car transport where much of the overall difference in energy use lies. The reasons for this difference are manifold but Slagorsky suggests they originate largely with "...the historically lower energy prices in North America, encouraging larger and heavier cars with bigger engines."²⁹ The usually assumed reason of the greater distances involved in North American travel proved false and the study found that

higher energy use in Canada and the United States was the result of car per capita ownership rather than average utilization of each vehicle.³⁰

The foregoing discussion takes on particular importance when it is realized that the real cost of energy (petroleum) is expected to continue to rise in the immediate future. Most analysts suggest that real world oil prices will increase about two percent per year during the 1980's.³¹ In Canada, there can be no doubt that domestic oil prices will increase in real terms during the next ten years. Since 1974, Federal policy has been designed to increase domestic oil prices gradually towards the international level. Increases at the recent rate of \$2.00 per barrel per year however will probably not be sufficient to bring domestic prices to the international level during the next decade, in view of recent and prospective rises in international oil prices. The increasing cost of petroleum is bound to have a dramatic impact on industry, transportation and consumer behaviour in the next few years.

2.3 Energy and the Economy: The Link to Tourism

The two energy crises of the last decade brought about dramatic economic repercussions throughout the world. The most visible effects were the periods of increased inflation and decreased aggregate demand that followed each energy shock, causing consternation among governments, industry and consumers. In fact, the energy crisis altered the

entire paradigm of economics in the industrial world. The periods of stagflation - high rates of both unemployment and inflation - that followed each dramatic oil price increase were conditions that were held to be mutually exclusive by traditional economists.

It can be shown that the energy crisis impacts on the economy in two ways. First, increased oil prices translate into higher costs throughout the production/transportation/consumption networks of the entire economy. This phenomenon results in higher rates of inflation commonly measured by consumer price indices and is eventually reflected in consumer confidence and future wage demands. Second, the higher costs mean that fewer goods and services can be purchased with a specific amount of money and more money than expected is being applied against increased energy costs. Therefore, the amount spent on other materials is reduced. When increased energy costs are due to the actions of non-domestic producers, there is an actual loss in the domestic money supply. The increased energy costs result in decreased aggregate demand and are reflected in higher unemployment figures and decreased growth rates for Gross National Production (GNP).

Prior to October 1973, the major industrial economies of the world were experiencing above average economic growth. From 1960 to 1972, the Organization of Economic Co-operation and Development (OECD), comprised of the developed nations of Western Europe, North America and Asia, had recorded economic growth of 5.4%. This rate increased to 6.3% in 1973 but fell dramatically to 0.3% in 1974 and -8.0% in 1975.³² At the

same time, consumer prices increased after the 1973 energy crisis. The general OECD inflation rate averaged 5.2% between January 1967 and December 1972. From January 1973 to December 1977 the inflation rate rose to 9.7%, or 85% higher.³³

It would be an error to place the entire blame of inflation in the seventies only on oil prices. In point of fact, world inflation rates in the early 70's were much higher than those of the previous decade. A number of factors had changed significantly to produce the highest rates of inflation the industrial world had experienced since World War II. Among them was the failure of the American administration to finance the war in Vietnam out of current revenue; the increases in primary commodity prices resulting from strong demand conditions by the synchronization of economic activity in industrial economies; and a series of bad harvests. These factors led to the breakdown of the Breton Woods currency system and the resulting instability itself added to inflation. Therefore, inflation was already high and rising by the middle of 1973 before increases in oil prices actually took place.³⁴

In much the same way, the recession of 1974-75 cannot be solely attributed to the first energy shock of the decade. Economic activity was slowing down in early 1973 prior to the energy crisis. The data indicates that the energy crisis may have worsened the recession, even though the crisis was clearly the most visible factor involved in the downturn.³⁵ In the short-run, the higher energy prices acted much like

an excess tax raising the general price level of goods and services and depressing economic demand. "These developments lengthened and deepened the post embargo recession in most countries."³⁶

It is important to point out that there were a few exceptions to this picture of high inflation and low economic growth. West Germany, Switzerland and Japan all enjoyed above average economic output and lower rates of inflation. The reasons for this remarkable performance are related to the overall economic and energy policies of these particular nations. The Ontario Economic Council argues that the explanation can be attributed to national currencies.³⁷ OPEC's price increases apply to all countries equally. When it raised prices from around \$(US) 2.00 a barrel in January 1970 to \$(US) 24.00 a barrel in December 1979, every country was subject to the same increase in the dollar prices. But some countries, notably the ones in question, were able to buy OPEC's petroleum at a price in their own currencies which were appreciating against the American dollar. Therefore, the increases in OPEC's prices were relatively less for West Germany, Japan and Switzerland than they were for the United States or Canada. Since the value of the mark, franc and yen more than doubled between 1973 and 1979, OPEC's price hikes have been less serious for their inflation rates.

The Ontario study does not explain why those particular currencies appreciated compared to the dollar, but the reasons for the dollar devaluation are numerous and well known. The decline of the U.S. dollar is chiefly attributed to the huge American oil import bill, the balance of

trade gap and the balance of payments deficit. These events are the result of a complex set of incidents which included the fact that America's growth rate expanded faster than its main trading partners; to mammoth budgetary deficits in 1977 and 1978; the phenomenal increases in the trade surpluses of Japan and West Germany (both incidentally, more dependent on foreign oil than the United States); the spectre of another round of domestic inflation in the American economy in 1978; and a lack of confidence by the rest of the world in the dollar's future - based on the real or imaginary belief that the United States was neither willing nor able to stem the dollar's decline.³⁸

The strength of the currencies of Japan, West Germany and Switzerland during the seventies was due to a combination of domestic policies as well as international developments. Whatever the reasons, when the concern is the effect of OPEC's price rises upon the inflation rate and level of output, the fact that the price of petroleum rose at a significantly lower rate in Switzerland, West Germany and Japan than it did in other countries is surely relevant. It tends to confirm the hypothesis that increases in energy prices help explain rising prices in general as well as a decline in a country's aggregate output.

Whether increased oil prices are solely to blame or not, the first energy crisis of 1973 altered the economic reality of much of the world. The long period of high inflation coupled with low growth has brought about a dramatic weakening of consumer confidence, lower investment, and sluggish reactions to changes in economic policy. In fact,

all the common instruments of economic policy - fiscal, monetary and exchange rate - have been less effective than was expected.³⁹

Although only preliminary data are available at this time, the impacts of the second energy crisis (1979) differ from the first shock in a number of ways. On an international scale, the immediate percent reduction in world and especially American aggregate demand has been less than it was six years ago. In Western Europe the recession arrived later but is more serious than expected. In addition, industrial countries are now much more concerned about the high rates of inflation than about unemployment. Therefore, many governments have adopted more restrictive policies in reaction to the oil price increase than they did in 1974-75. Also, governments today are trying to raise exchange rates through higher interest rates to reduce imported inflation, even if it means less economic activity and more unemployment. Concerning the OPEC nations, the capacity of these nations to absorb larger and larger oil revenues seem diminished this time. The experience of the last six years has awakened the OPEC nations to the consequences for economic and social stability if they continue their current rate of revenue absorption. Finally, non-oil developing nations have been hurt more this time. Parts of the private banking system are now over-strained and the prolonged period of low growth has not only reduced world trade with the developing world but strengthened protectionism as well.⁴⁰

The Canadian economic experience during the last decade in response to the two energy shocks has been distinctive and unique among the world's industrialized nations. Up to the mid-70's, the Canadian performance was not out of line by international standards. The difference was that Canada, as a major producer and exporter of resources, benefited greatly from the commodity price boom of the early seventies. Between 1972 and 1974, Canada obtained the largest improvement in terms of trade in our history. These favourable developments induced policy-makers to try to avoid the recession that gripped the industrial world and to pursue an independent gradualist policy on oil and gas prices. Real disposable incomes were protected and policies were aimed at keeping the economy expanding.⁴¹

After the oil price increases in 1973, most OECD countries quickly absorbed the oil-price hikes, incurring a dramatic but relatively short-term increase in their inflation rates. Neither Canada nor the United States did so, but the United States experienced a sharp recession that reduced its inflation rate. As a result of expansionary policies and high expectations, Canada's inflation rate kept on accelerating into 1975. In an attempt to reduce inflation and improve the competitive position of Canadian products in world markets, price and income controls were instituted in the fall of 1975. Some initial abatement of inflation was realized in 1976 because of lower foodcosts and the continued strength of the Canadian dollar in foreign exchange markets. The depreciation of the dollar in 1977 and 1978 added substantially to price increases. At the same time, food prices took

a turn for the worse and the gradual adjustment of domestic oil and gas prices to world price levels also added to the inflation rate. At the beginning of 1979 - a year of price increases from OPEC and talk of recession in the United States - the inflation rate, at around 9%, was not a great deal lower than the rates of 11% in the mid-70's. Concerning real incomes, large gains were made in the first half of the decade, but the growth trend has recently come to a virtual halt due to the slow growth in productivity and the lower growth of employment in relation to the population. Finally, expectations of real income growth have been tempered in light of deficits in the federal budget and current account of the balance of payments, as well as the anticipated increase in domestic prices for oil and gas.⁴²

The events of the past few months suggest that the recession of 1979-80 in both the United States and Canada will be of equal size. If so, this situation will be in sharp contrast to what happened in 1974-75, the last recessionary period when the fall-off in Canada was much less severe than in the United States. Subsequent expansion was much less robust in Canada than in the United States where real GNP grew by 19% between 1975 and 1979 compared with only 15% in Canada. The two recessions in Canada during the last decade differ not only in magnitude but also in character. Firstly, the reduced consumer and government spending of the most recent economic downturn is in contrast to the previous one which was essentially a trade oriented decline. The second difference is the fact that the federal government's already huge deficit position effectively precludes significant government stimulative action. In contrast, in 1974-75, the movement from a surplus

position to a large deficit gave an important boost to the economy. To increase the present deficit further for stimulative reasons would tend to have counterproductive results.⁴³

This section has identified the interrelationships between energy and the macroeconomic variables as employment, inflation and GNP growth. It is important to recognize that the causal relationships between energy and the macroeconomy run in both directions. Most people are aware of how increases in energy demand are brought about by growth in GNP but only recently have people become aware of the importance of energy to Gross National Product expansion itself.

The links between the economy and tourism - both domestic and international - are obvious. First, the tourism industry is an integral part of any economy. In the developed world, the tourism industry accounts for a substantial part of the overall economy whether measured by jobs, establishments, revenue or a portion of GNP. In Canada, it is estimated that the tourism industry employs 9% of the total labour force, is comprised of 100,000 establishments and accounts for 8% of Gross National Product.⁴⁴ The magnitude and importance of the tourism industry in the national economy means that tourism is directly affected by any downturn in the business cycle. Econometric models have demonstrated the statistical link between economic performance in terms of GNP, wages, inflation, prices at home and abroad and tourism demand as measured by the number of domestic nights and international nights and expenditures.⁴⁵

Second, the tourism industry is also dependent on a healthy economy since it has been traditionally defined as a discretionary activity. The growth of tourism since the end of World War II has been due to well documented economic developments. Increased productivity and technological advances have led to increased disposable incomes, leisure time, mobility and an interest in global travel by the peoples of the developed world. The conventional wisdom has always stated that the discretionary nature of tourism makes it extremely vulnerable to economic downturns. On the surface, however, the evidence of the last decade appears to contradict this hypothesis. Both the tourism committee of the OECD and the World Tourism Organization(WTO) make it a point to note that tourism, at the international level, has weathered the stress of OPEC's actions surprisingly well. "Since the 1973 energy crisis, tourism has withstood the vicissitudes of changes in natural and international economies better than other sectors of the economy."⁴⁶ The OECD states that

international tourism has demonstrated a vitality of its own since it satisfies needs increasingly considered essential by the populations of countries which have reached a certain level of economic and social development.⁴⁷

On a global scale this may be the case, but on a regional or country scale, the varying adverse effects of the energy crises of the last decade have had detrimental impacts on national tourism industries.

The third link between tourism and the economy is the phenomenon of business travel itself. Business travel plays a complementary as well as a competitive role to recreational/personal travel by maximizing the efficient use of the resources of the tourism industry. Monday to Thursday business travel maintains accommodation occupancy rates between the weekend recreational travel demand. In the same way, the higher air fare business travellers pay, in effect, subsidizes the recreational traveller with a flexible schedule. Although business travel is not insulated from economic recessions, it tends to be more stable overall and less subject to extreme fluctuations.

One of the lessons of the last decade must surely be that the impact of the energy crisis was not felt uniformly throughout the developed world. The magnitude of the effects of energy supply and price changes in a particular country are determined by a number of domestic and external variables. The domestic variables include the present patterns of energy demand, structure of the economy, social characteristics, resource potential and the political policies adopted by the nation in question. External factors of importance are the fluctuations of exchange rates, the structure and volume of foreign trade and the relative performance of an individual country in the international economy. An irony of the last decade is the relative success of the economies of Switzerland, West Germany and Japan, countries that are nearly totally dependent on imported oil compared to the two industrial nations of North America that enjoy relatively abundant petroleum resources.

2.4 Gasoline Prices

One of the most important characteristics of the energy crisis is the aspect of increasing gasoline prices and their impact on mobility in general and more specifically on the tourism industry in Canada. There are a number of reasons why the question of increasing gasoline prices deserves isolated attention.

First, increasing gasoline prices are the most visible and personal aspect of the energy crisis. In terms of the public's consciousness, changes in the pump-price of gasoline have the most impact because they are so widely felt. Automobile travel is almost an essential element of modern society, especially in North America, therefore, nearly everyone is directly affected by higher gasoline prices and indirectly continually aware of the energy crisis.

Second, the most serious part of the energy crisis concerns liquid petroleum fuels. Almost one half of this fuel is used in transportation⁴⁸ where substitution by other energy sources is presently impossible. Other daily activities that consume energy - heating and cooking - have alternative resources available such as hydro or coal to produce the required BTU's. At present, highway transportation is dependent on the internal combustion engine which at present relies solely on petroleum products for its source of fuel. Increased fuel efficiency is certainly possible in the present fleet of autos and trucks, but, until new forms of technology are developed, increased gasoline prices will play an important role in the evolution of transportation over the next decade.

Third, increasing gasoline prices have a direct impact on the tourism industry because of the role of the automobile. Since automobile travel is the foundation of the tourism industry in the United States and Canada, increasing gasoline prices are another critical link between the industry and the energy crisis. Increasing petroleum costs are bound to alter automobile travel patterns and result in significant changes in the structure and character of the tourism industry in the near future.

Due to the importance of the impact of increasing gasoline prices, this section intends to examine the question on an international, historical and personal level. Gasoline prices will be analyzed and compared in an international or cross-country context which reveals the developed world's response to the energy crisis events of the last decade. When gasoline prices are reviewed over time, the recorded increases can be distinguished as nominal or real, a distinction of critical importance in understanding the elasticity of demand for gasoline. Finally, the phenomenon of increasing gasoline prices and their impact on travel has provided social scientists with a mother-lode of research material. Numerous papers have presented the findings of theoretical studies in an attempt to understand the relationship between increased prices and demand. The work has concentrated on the impact of increased gas prices on travel in general and recreational travel specifically by examining reported behaviour or behavioural intentions.

An historical cross-country analysis of the evolution of gasoline prices, during the last decade, reveals a rather surprising reaction by the oil-importing industrial government's to the changing energy scene. An International Monetary Fund paper by Tait and Morgan entitled Gasoline Taxation in Selected O.E.C.D. Countries, 1970-79 provides an assessment of the role of gasoline taxation since the oil price increases of late 1973 and early 1974.⁴⁹ The findings indicate that OPEC petroleum price increases created a new role for gasoline taxation as an instrument to assist in the reduction of OECD countries' dependence on imported oil. Such a role implied the need for an increase in the real value of gasoline taxation from October 1973 levels or, at a minimum, for the avoidance of any decline in real terms. Additionally, gasoline taxation could have been used to avoid any decline in real gasoline prices arising from a softness in world oil markets or from particular currency appreciations vis a vis the United States dollar.⁵⁰

The evidence shows that in the OECD countries under study "...the increases in the relative price of gasoline in the period 1970-1978 are less than might have been expected on a basis of the crude oil price increases."⁵¹ A major factor in the apparently modest increases in gasoline prices compared with the increases in crude oil prices was the decline in effective gasoline tax rates. These rates declined sharply after the rise in world petroleum prices in early 1974. The trends generally reflected the fact that the specific component of gasoline taxation was not adjusted upward significantly to match the rising general price level over the period.⁵²

The evidence of the last decade shows that while all countries increased the nominal magnitude of gas taxation per gallon, there was no movement toward a homogeneous taxing approach. Those countries that taxed gasoline heavily before the 1973 oil crisis continued to do so after the crisis. On the other hand countries that did not impose heavy taxes on gasoline - the United States and Canada - did not alter their relative position after the critical OPEC price increases. There is also substantial evidence to suggest that none of the countries, with the exception of Italy, exploited the potential of gasoline taxation, either as a revenue generating instrument or as a policy for promoting gasoline conservation.⁵³

The difficulty in raising retail gasoline taxes has been attributed by some to voter resistance. In Canada, one of the oft cited reasons for the defeat of the Progressive Conservative government in February 1980 was its proposal to increase the federal sales tax on gasoline by 18 cents a gallon. The federal sales tax on motor gasoline has remained at seven cents per gallon since it was first imposed in 1975. Up until the spring of 1980, British Columbia had been the only province to raise its motor fuel tax and then only from 15 cents to 17 cents per gallon. In 1973, Alberta eliminated its provincial tax.⁵⁴

The way the gasoline tax is applied in North America is partially responsible for the actual decline in the real price of gasoline. In the United States and Canada, these taxes have traditionally been levied on a cents-per-volume basis; for nearly all other retail commodities, a

percentage-of-sales tax has been applied. In other words, as the price of motor fuels increases faster than the quantity of motor fuels bought, the average sales tax rate declines as a percentage of final sales. Unless the tax rates are periodically raised through legislation, the rate of growth in retail gasoline prices will increase more slowly than would be the case with a normal percentage-of-sales tax. In 1980, the Canadian federal government and some provinces have enacted measures to counter this trend. In the government's "mini-budget" of April 21, 1980, the regular federal sales tax on motor fuel was converted from a per-volume rate to a sale-value rate. The governments of Prince Edward Island, Québec and Manitoba also passed similar legislation.⁵⁵

It seems clear from the evidence in Canada and abroad, that gasoline taxation has not been widely adopted as an instrument of energy policy. Possible explanations include skepticism regarding the effectiveness of, or necessity for, higher gasoline taxation in securing energy policy options. Alternatively, higher gasoline taxation might have been viewed as inconsistent with other government objectives, including control of inflation, an equitable distribution of income and staying in power. Finally, it may have been thought that higher gasoline taxation would induce further oil price increases by the major oil exporting nations.

At the heart of the relationship between gasoline prices and energy policy is the concept of elasticity of demand - an issue easily understood but difficult to accurately measure. Elasticity is defined as how much demand will decrease due to a specific increase in price. Most studies indicate that the demand for gasoline is relatively insensitive to price changes in the short-term (less than a year) but is relatively sensitive over the long-term (one to six years). A figure for short term elasticity in the range of $-.15$ to $-.2$ is most often cited. This relatively low magnitude is because consumers have very little control and flexibility in decreasing their use of energy or even of substituting between alternative fuels in the short-run. If energy prices suddenly increase, consumers cannot within one or two years be expected to replace their cars with smaller and more fuel efficient ones. However, over a longer period of time, increased ownership of smaller automobiles will reduce gasoline demand but this will not be reflected in the short-term elasticity rates.⁵⁶

Elasticity estimates are usually derived to reflect the possible impact on travel as a whole. More important to industry officials and policy planners are the different elasticities of price increases on specific categories of travel such as business, convention, vacation and visiting friends or relatives. The fact of multiple influences upon demand must be recognized and, somehow, be factored into an explanation of the relationship. The timing of the increase in price represents another critical element in calculating elasticities. A large immediate price increase will have a greater impact on demand than gradually raised prices. The evidence shows that during the last decade, real price increases in gasoline over time have been eroded into nominal

increases because of inflation that has augmented the general price of all other goods, services and incomes. This fact has confused more than resolved much of the discussion about gasoline prices and demand in Canada and abroad.

Due to the importance of the relationship between rising gasoline prices and recreational travel, numerous studies have been conducted into the subject. For comparative purposes, the available studies have been compiled into two broad research approaches. The first group includes papers that have studied the intended changes in recreational travel of consumers to higher prices while the second set of articles examined the actual relationship between higher gasoline costs and recreational travel by documenting reported behavioural changes.

The studies examining intended changes in recreational travel plans in light of increased gasoline costs arrive at a number of important conclusions. The effects of increased prices are determined in part by the type of trip to be undertaken - visiting friends or relatives, business or pleasure - and the fuel efficiency of the car.⁵⁷ Positive relationships were found to exist between income and travel propensity during expected times of higher gasoline costs. Lower income groups tended to travel less frequently, and for shorter amounts of time.⁵⁸ Finally, over the long-run, it is expected that people will become accustomed to higher prices and travel will become more strategically planned. If this occurs consumers may travel less frequently, choose closer destinations, stay longer at these destinations or abandon the auto for longer trips.⁵⁹

One major flaw exists in the findings dealing with travel intentions and increased gasoline price studies. The flaw relates to the means of establishing the relationship between gasoline prices and travel intentions. Usually the respondent is given a range of gasoline prices and asked to pick the cost at which he would curtail recreational travel. Findings are then produced which state that at \$1.50 a gallon, for example, a majority of the people surveyed would curtail travel to some extent. History has shown, however, that by the time the price of gasoline has risen to this threshold level, other important economic factors have also evolved. In one instance, incomes may have risen so that the real price of gasoline in fact has decreased, or alternatively, people may curtail travel because they have been put out of work by the higher cost of energy. Experience has shown that actual behavioural changes turn out to be of a much smaller magnitude than intention surveys would suggest.

Studies designed to measure actual behavioural changes in response to external stimuli provide a more realistic measure of the phenomenon, although they are much more difficult to undertake. Gasoline prices cannot be raised on demand for researcher's benefit and, therefore, they must remain prepared to take advantage of unpredictable external stimuli. In addition, the problem of recall is inherent in any survey that asks respondents to describe and quantify reactions to events over a number of months.

Most of the work dealing with reported behavioural changes and increased gasoline prices has concentrated on general travel patterns, so that the findings are not always applicable to the tourism industry. Willenborg and Pitts discovered that consumers in North America are unlikely to decrease the number of miles which they drive in any short-term period, except perhaps in reaction to a crisis situation.⁶⁰ Other studies have identified those segments of the market which are likely to change their behaviour and the underlying reasons for their response. Social status, as defined by income and occupation, and the availability of alternative transport modes - measured by city size and urban/rural distinction - were found to be the determining factors of consumer response.⁶¹ Alternatively, Sacco and Hajj found that the shifts in travel behaviour in reaction to the 1973/74 energy crisis were moderate in nature and consumers conserved by adjusting their driving habits and not by shifting modes.⁶²

In terms of studies dealing with tourist travel specifically, Wolfe provides the most detailed cross-country examination of recreational highway traffic in times of energy scarcity.⁶³ In an attempt to predict what may happen in Canada if the energy situation becomes critical, Wolfe examined the experience of Europe after the 1973/74 crisis. The events in Denmark, Sweden and Norway were reviewed because these countries have similar landscapes, climate and proportion of cottage owners as Ontario. A surprising result of the study was that in some cases, recreational travel by car was less effected by the energy crisis than journey-to-work auto travel. A finding that seems to be an inversion of reality: in terms of the private car, the trip to work;

which is obligatory, had become discretionary, because other modes of transportation could be substituted for the car. In contrast, the presumably discretionary recreational trip had become obligatory, since if one is to get to the resort country one is forced to use one's own vehicle. Other evidence at different locations was the opposite, or what one might expect - that recreational car travel decreased more than journey-to-work auto travel. The analysis shows that consumer reactions in different locales depends on the particular circumstances and may produce what seem to be conflicting results.⁶⁴

Although Wolfe's observations are based on gasoline shortages and not price increases, his findings demonstrate how complex the set of altered travel pattern reactions can be. Corsi and Harvey point out that a household's decision whether or not to adopt vacation plan strategies in response to higher gasoline costs depends on a number of related socio-economic and demographic variables. The most significant ones were found to be age, occupation, income and the number of children under 15 years of age in the family.⁶⁵

The effects of increased gasoline prices on consumer demand is at the same time one of the most important and least understood aspects of the energy crisis. The evidence of the last decade shows that oil-importing governments, through gas tax decisions, purposely let the real price of gasoline decline. A trend that has in many ways confused the issue of the elasticity of the demand for gasoline as prices increased only nominally. In effect, the history of real gasoline prices has

negated much of the direct impact of the energy crisis on automobile transportation in North America and Western Europe. The indirect effects of the crisis, however, filtering through the economic system have altered recreational highway travel. Theoretical studies have demonstrated that under increasing gasoline price conditions, consumers will adjust by any number of means and that the amount of adjustment depends by and large on the socio-economic characteristics of the consumers involved. One underlying lesson which permeates these theoretical studies is the heterogeneity of the results. Increased gasoline prices impact on individuals, regions, countries and societies in varying magnitudes depending on the economics, politics, values and demographics of those involved.

In October 1973, the world entered a new era of higher energy costs and restricted supply. The actions of OPEC since then have re-structured the geo-political relations of the world as well as the evolution of every nation. A historical review of the events associated with petroleum production, the Middle East and the actions of OPEC demonstrates the volatile and unpredictable nature of the region. Since 1973, Canada has continued to import OPEC oil in increasing quantities to augment decreasing production from conventional sources. If present trends continue, Energy, Mines and Resources estimates predict that by 1985, Canada's net imports will surpass half a million barrels a day and cost more than double our present petroleum deficit. Ample domestic non-conventional petroleum reserves are available, but not until the late 1980's. The expense of this non-conventional development in terms

of capital formation, labour and technology availability may place irreversible strains on the economic, political and social fabric of Canada.

Increased energy costs have affected the economy of every nation. On a micro-economic level, higher energy prices alter the factors of production of each good and service. Aggregated to a macro-economic scale, this impact can be measured by increased inflation rates and decreased overall demand. Prior to 1975, Canada was virtually self-sufficient in petroleum and could therefore pursue a domestic oil pricing policy set below the levels set by OPEC. Today, Canada is no longer self-sufficient in energy but still maintains the lowest petroleum prices in the developed world. The spector of increased energy costs in Canada in terms of higher gasoline prices, is a definite possibility through the 1980's. International studies have demonstrated that real gasoline price increases have measurable impacts on recreational travel and tourism as consumers react to changing energy conditions. International and domestic petroleum demand and supply scenarios for the 1980's portend of drastic developments in Canada's energy situation. The implications for the tourism industry are ominous.

FOOTNOTES FOR CHAPTER 2

The Energy Crisis Phenomenon

2.1 The Evolution of the Energy Crisis

- (1) J.R. Carmichael, "World Oil Cartel May Take Shape", New York Times, 25 September, 1960, p. F1.
- (2) Peter R. Odell, Oil and World Power, Middlesex, England, Penquin Books, 1974, p. 196.
- (3) R. Stobaugh and D. Yergin, (ed.), Energy Future, New York, Random House, 1979, p. 18.
- (4) Ontario Economic Council, Policies for Ontario's Energy Problem, Toronto, 1980, p. 18.
- (5) Stobaugh and Yergin, p. 28.
- (6) P. Morici, "Impact of Higher Oil Prices on Economic Growth in the Industrial Economies", in A.B. Askin, How Energy Affects the Economy, Lexington, D.C. Heath and Co., 1978, p. 40.
- (7) J. Frank Roberts, "The Energy Crisis' Effect on Tourism", Canadian Travel Courier, 10 January, 1980, p. 7.

2.2 Supply and Price: The Critical Issues

- (8) Petroleum Economist, August, 1980, pp. 342 and 348.
- (9) Ronald Anderson, "Search for new energy should be on crisis basis", Globe and Mail, 8 May, 1980, p. B2.
- (10) Energy, Mines and Resources, Canadian Oil and Gas Supply/Demand Overview, Ottawa, November 1979, pp. 4 and 10.
- (11) Ronald Anderson, "Explosion looming in Western Canada", Globe and Mail, 7 October, 1980, p. B2.
- (12) J.R. Brodman and R.E. Hamilton, A Comparison of Energy Projections to 1985, Paris, International Energy Agency Monograph, O.E.C.D., January 1979, pp. 1-156.

- (13) Personal communication with Canadian Arctic Resources Committee, October 21, 1980.
- (14) Energy, Mines and Resources, An Energy Strategy for Canada (Summary), Ottawa, 1976, Table 3, p. 22.
- (15) Ronald Anderson, "Self sufficiency goal going down the drain", Globe and Mail, 9 September, 1980, p. B2.
- (16) Fred Harrison, "Odds mount: mid-80s oil crisis", Financial Post, 21 June, 1980, p. 1.
- (17) D.G. Waddingham, Financing Canadian Energy Projects, paper presented to Canadian Society of Petroleum Geologists, Calgary, 29 September, 1980, p. 1.
- (18) Ronald Anderson, "Consumers must fund energy development", Globe and Mail, 1 October, 1980, p. B2.
- (19) D.A. Rustow, "U.S. - Saudi Relations and the Oil Crisis of the 1980s", Foreign Affairs, Vol. 55, No. 3, April 1977, p. 510.
- (20) L. D'Amore, "World Energy Requirements - A Historical and Future Perspective", The Business Quarterly, Winter, 1979, p. 49.
- (21) Province of Nova Scotia, Energy Outlook 1990, Halifax, November 1978, p. iv.
- (22) H.M. Davey, "The relative cost of gasoline", Globe and Mail, 13 October, 1980, p. 6 (letter to the editor).
- (23) R.S. Pindyck, The Structure of World Energy Demand, Cambridge, Mass., The M.I.T. Press, 1979 pp. 9 and 10.
- (24) Ibid., p. 5.
- (25) Waddingham, Table 4, p. 19.
- (26) Pindyck, p. 6.
- (27) C.Z. Slagorsky, Energy Use in Canada in Comparison with Other Countries, Calgary, Canadian Energy Research Institute, Study No. 8, June 1978, pp. 7 and 8.
- (28) Slagorsky, pp. 1-78.
- (29) Ibid., p. 42.
- (30) Ibid., p. 44.
- (31) L.M. Thur, Canadian Energy Supplies in the 1980's and the Consequences for Tourism, paper presented to the Atlantic Insular Conference "Tourism and the Energy Crisis", Halifax, November 1979, p. 15.

2.3 Energy and the Economy: The Link to Tourism

- (32) Morici, p. 42.
- (33) Ontario Economic Council, p. 26.
- (34) D. Healy, "Oil Money and Recession", Foreign Affairs, Vol. 58, No. 2, Winter 1979/80, p. 219.
- (35) D.E. Serot, "The Energy Crisis and the United States Economy 1973-75", in A.B. Askin (ed.), How Energy Affects the Economy, p. 11.
- (36) Morici, p. 47.
- (37) Ontario Economic Council, pp. 26 and 27.
- (38) J. Amuzegar, "OPEC and the Dollar Dilemma", Foreign Affairs, Vol. 56, No. 4, July 1978, p. 149.
- (39) Healy, p. 221.
- (40) Ibid., pp. 222-224.
- (41) Economic Council of Canada, Two Cheers for the Eighties, Ottawa, Supply and Services Canada, 1979, pp. 1-91.
- (42) Economic Council of Canada, pp. 4-8.
- (43) Bank of Montreal, "Recession Takes Hold", Monthly Newsletter, August 1980, p. 4.
- (44) Canadian Government Office of Tourism, Tourism Facts Book, Economic Research Section, 1980.
- (45) S. Schulmeister, Tourism and the Business Cycle, Vienna, Austrian Institute of Economic Research, 1979, pp. 15 and 16.
- (46) "Development of international tourism in 1979 and prospects for 1980", World Travel, No. 153, March-April 1980, p. 9.
- (47) Organization for Economic Co-operation and Development, Tourism Policy and International Tourism in OECD Member Countries, Paris, July 1979, p. 13.

2.4 Gasoline Prices

- (48) A.A. Bach, "Transportation and Energy", Forum, Roads and Transportation Association of Canada, Vol. 1, No. 3, 1978, p. 55.
- (49) Alan A. Tait and David R. Morgan, Gasoline Taxation in Selected OECD Countries, 1970-79, International Monetary Fund Staff Papers, Vol. 27, No. 2, June 1980, pp. 349-379.

- (50) Ibid., p. 353.
- (51) Ibid., p. 357.
- (52) Ibid., pp. 359-361.
- (53) Ibid., pp. 377-379.
- (54) Statistics Canada, Principle Taxes in Canada, Ottawa, Cat. No. 68-201 E, 1978, pp. 34 and 35.
- (55) D. Murrell and J. Sheriden, "Move to World Gasoline Prices", The Canadian Business Review, Autumn, 1980, p. 31.
- (56) Pindyck, pp. 2-3.
- (57) D. Dan Kamp, J.L. Compton and D. Hensarling, "The Reactions of Travellers to Gasoline Rationing and to Increases in Gasoline Prices", The Journal of Travel Research, Summer 1979, pp. 40 and 41.
- (58) L.W. Moncrief, T.W. Mouser and P. Pitrak, "The Influence of Gasoline Prices and Availability Upon Recreation Travel Propensity", Energy Communications, Vol. 3, No. 5, 1977, p. 444.
- (59) J.F. Burke and P.W. Williams, "Gasoline Prices and Availability: What do they mean for Tourism", Utah Tourism and Recreation Review, Vol. 8, No. 3, July 1979, p. 7.
- (60) J.F. Willenborg and R.E. Pitts, "Gasoline Prices: Their Effect on Consumer Behavior and Attitudes", Journal of Marketing, Vol. 41, No. 4, 1977, p. 30.
- (61) B.W. Becker, D.J. Brown and P.B. Schary, "Behavior of Car Owners During the Gasoline Shortage", Traffic Quarterly, Vol. 30, No. 3, July 1976, p. 482.
- (62) J.F. Sacco and H.M. Hajj, "Impact of the Energy Shortage on Travel Patterns and Attitudes", Transportation Research Record, Vol. 561, 1976, pp. 8 and 9.
- (63) R.L. Wolfe, "Patterns of Recreational Highway Traffic in Time of Energy Scarcity: A Progress Report", Proceedings, Second Congress of Leisure Research, 1979, pp. 1-13.
- (64) Ibid., pp. 10-13.
- (65) T.M. Corsi and M.E. Harvey, "Toward a Causal Model to Explain Differing Household Vacation Patterns As a Result of Higher Fuel Prices", Journal of Leisure Research, Vol. 10, No. 4, 1978, pp. 7-11.

CHAPTER 3

THE IMPACT OF THE ENERGY CRISIS ON THE TOURISM INDUSTRY IN CANADA

A complete examination of the tourism industry in Canada must include its three spatial components - demand, linkage and supply. This trichotomy includes the concepts of economic geography in general and the spatial interactions specifically which are common to (i) the place of demand, (ii) the place of supply and (iii) the spatial linkages which connect the two places.¹ The geography of tourism is concerned essentially, though, not exclusively with the spatial expression of these relationships and phenomena.²

The demand/linkage/supply spatial trichotomy is inter-related in both directions. Changes in demand may alter the utilization of different modes in the linkage network and may result in shifting supply conditions. The converse is equally true - the evolution of the supply component will create new levels of demand. Finally, the linkage segment plays a pivotal role in this interaction, so that, factors affecting the linkages impact, directly and indirectly, on both demand and supply.

An objective of this paper is to examine the impact of the energy crisis on the tourism industry in Canada. To facilitate this process, a matrix has been constructed (and introduced in Chapter 1) with the energy crisis and tourist industry along its axes. The left-hand side of the matrix is composed of the two distinct energy crisis periods: (i)

the two short-term critical periods of actual supply interruptions and increased prices (4Q73 to 4Q74 and 4Q78 to 4Q79), and (ii) the adjustment periods of 1Q75 to 3Q78 and 1Q80 to ?, a time when the world's economies and societies attempted to adapt to increased energy costs. Along the top of the matrix are the three spatial components of the Canadian tourism industry - demand, linkage and supply.

Figure 3.1

Energy Crisis/Tourism Industry MatrixCanadian Tourism Industry

Energy Crisis	Demand	Linkage	Supply
Critical Periods (4Q73-4Q74) (4Q78-4Q79)	A.	C.	E.
Adjustment Periods (1Q75-3Q78) (1Q80-?)	B.	D.	F.

The array of cells has been identified alphabetically to facilitate identification in the following text.

It must be recognized that the network of intersections between the two phenomena and lines that subdivide the matrix should not be thought of as solid or rigid. In fact, the lines are only graphic representations of ranges of time and space that are not always synchronized in the real world. The actual duration of the two energy crisis periods may differ slightly for each and within each of the three components of the tourism industry due to the effect of time lags. The matrix is worthwhile because it does provide a methodology in which this complex subject can be organized, evaluated, synthesized and described in a logical and comprehensive fashion. Each of the three spatial elements will be analyzed to identify the impact of the two aspects of the energy crisis. Preceding each analysis of the three columns, the components will be defined and the theoretical hypotheses associated with each will be briefly described.

3.1 Demand

Theoretically, it is widely recognized that the demand for travel and tourism is directly related to the demographical, economical, social, political, and geographical characteristics of the population in question. A strong correlation has been established between domestic and international tourism demand and shifts in the business cycle, after factoring in important time lags between events.³ Since the business cycle is partially related to political events, both national

and international, the tourism demand/business cycle relationship identifies a hidden link between politics and tourism demand.

Concerning the mix of tourism demand, in terms of international or domestic destinations, elements other than economic factors are extremely important. The physical and geographical characteristics of a nation play a critical role in the actual number of international or domestic tourists a country generates. The levels of foreign tourism expenditures are determined as much by the tourist possibilities at home as they are by domestic disposable income rates.

Finally, on a theoretical level, the demand for tourism is not homogeneous. Like the demand for any other consumer good or service, the market must be viewed as highly segmented, with each segment having its own tastes, likes and desires. Not surprisingly, marketing studies have demonstrated that the higher income groups spend more per capita on travel (international or domestic) than the lower income groups. The motivations behind the demand for tourism are associated with the psychology of those who travel. Plog⁴ views the market as a continuum between psychocentric consumers - those who are reluctant to travel - and allocentric or trend-setter consumers - the ones who "discover" new destinations. Since the continuum is normally distributed in a population, the supply side evolves from allocentric to mass market to psychocentric, sometimes with disastrous results.

The term demand used in this context warrants some explanation.

The term is usually associated with the discipline of economics. In that context, it refers to the quantity of a product which is consumed at a given price. As price increases, demand decreases, and as price falls so demand tends to rise. Demand, as it refers to tourism or recreation however, is defined as the use of existing facilities or participation rates in tourism and the desire to partake in tourism and recreation now and in the future.⁵ Demand, as defined above, actually incorporates three aspects:

- i) Effective demand: It consists of those people who actually take part and is usually measured in number of visitors, user-days, or frequency in participation. This type of demand can also be referred to as consumption as it is estimated under prevailing recreation and tourism opportunity conditions. Therefore, effective demand is actually the result of the interaction between demand and supply factors and is the measurement of actual consumption.
- ii) Deferred demand: Those people who could and would like to participate but do not, either, because of a lack of facilities or a lack of knowledge, or both of these.
- iii) Potential demand: This type of demand consists of those people who would like to participate but are unable to at the present, and require an improvement in their economic and social circumstances in order for them to be able to do so.⁶

Since deferred and potential demand can not be quantified, effective demand, as it has been defined, will be used in this paper. Effective demand, because it is a reflection of both demand and supply conditions, provides an accurate measure of travel and tourism during the last decade. Impacts on any part of the demand - linkage - supply chain will eventually be reflected in changes in the magnitude of effective demand. The effective demand will be analyzed in terms of travel patterns between (i) Canada and the United States, (ii) Canada and countries other than the United States⁷ and (iii) domestic travel. It will be shown that both periods of the energy crisis have had significant impacts - both positive and negative - on effective travel and tourism demand in Canada. Tabular data too extensive to be presented in the text of this paper appear at the end of the chapter.

A. Crisis Period - Demand⁸

The first energy crisis occurred in October 1973 when the Organization of Petroleum Exporting Countries embargoed oil to the United States and the Netherlands and raised prices unilaterally. Since the incidents took place in late '73, the full effect of these events on tourism in Canada only became evident in 1974.

At the international level, the energy crisis had its most adverse impact on international travel flows between Canada and the United States. The OPEC embargo manifested itself in gasoline supply deficiencies south of the Canadian border. In an attempt to manage this petroleum supply situation, United States federal authorities implemented an

allocation program which supplied service stations with less gasoline than they had received in the previous year. This supply situation forced service stations to limit their hours of operation by closing on the weekends. The line-ups which formed around gasoline stations were due as much to the psychology of the energy crisis as to the real supply deficit. The gasless Sundays most severe negative impact was on weekend travel and the tourist industry. The United States Travel Data Center reported that "...employment in the travel industry was 5% less during the embargo period than it would have been without the energy crunch."⁹ There was a stand-by federal rationing plan, to be implemented if conditions worsened, which would have had an even greater detrimental impact on the industry.

Figure 3.2 provides a graphic representation of the impact of the energy crisis on tourist travel to Canada from the United States. The left hand side of the chart displays these effects in actual numbers and percentage changes. The energy situation in the United States during late '73 manifested itself in a substantial decrease in automobile travel to Canada. Nearly one million less overnight or longer automobile entries from the United States were enumerated in 1974 compared to the previous year. During the year decreases were recorded in every quarter and in each of the seven provinces directly bordering on the United States. Non-automobile tourist traffic - represented on this graph by plane and bus modes only but also including boat and train entries - increased through 1974 as the gasoline crisis forced U.S. residents to shift to commercial modes. The two major mass modes, plane and bus travel, were up 12 and 4 percent respectively over the

Figure 3.2

Change in United States and Canadian Traffic by Mode Due to 1973/74 Energy Crisis

Variations du trafic entre le Canada et les États-Unis
selon le moyen de transport suite à la crise énergétique de 1973/74

United States Traffic

Trafic en provenance
des États-Unis

Base 1973 → 13,523,000
1974 → 12,735,000

Canadian Traffic

Trafic des résidents canadiens
revenant de voyages aux États-Unis

Base 1973 → 8,673,000
1974 → 8,556,000

year. The commercial modes increased their share of the market by 206,000, however, this represented only one fifth the numerical decrease in auto tourist travel to Canada. The hypothesis is that the mass modes were only able to attract part of the American travel market (probably the upper end) who would have visited Canada by car. The result of these trends was that total tourist entries declined from 13.5 million in '73 to 12.7 million, due to the drop in overnight automobile travel (Table 3.1).

Not surprisingly, Canadian tourist flows to the United States during 1974 exhibited many of the same characteristics as the American tourist flow north (right hand side of Figure 3.2). It should be noted that overnight automobile re-entries by Canadian residents had been declining through most of 1973. In the first quarter of 1974, however, the full effect of the gasoline problems in the United States were reflected in a thirty percent decline in overnight Canadian automobile re-entries. Decreases were recorded in the following two quarters, but in the fourth quarter of the year long-term automobile travel recorded an 8% increase. By this time, the energy crisis in the United States was apparently perceived to be over by Canadian residents (Table 3.2).

Like American non-automobile tourist travel, Canadians were attracted to the commercial modes in 1974. Non-automobile re-entries by Canadian residents increased in each quarter of the year, ending the period with a 349,000 gain. These trends produced only a slight decline (1%) in total tourist travel to the United States by residents of Canada.

The pattern of international travel between Canada and the United States in 1974 proved beneficial for Canada's travel balance. In 1974, Canada recorded a \$132 million dollar surplus with the United States, up from \$87 million in 1973. This surplus was to become the last positive annual travel balance with the United States Canada was to enjoy for the rest of the decade.

International travel between countries other than the United States and Canada was less affected by the 1973/74 energy crisis. The number of visitors from overseas countries increased in each quarter of '74 and ended the year recording a 15% gain to 1.1 million. Canadian travel to countries other than the United States was noticeably dampered by the changing energy conditions of late '73. The annual increase in 1974 was only 1.5% - much less than the 18% gain that had been recorded in 1973.

Domestic travel patterns by Canadians during 1974 reflect very little impact by the global energy crisis. The percentage of adult Canadians taking vacation trips declined for the second year in a row to 55%.¹⁰ In addition, for the second straight year, Traveldata estimated that Canada's overall share of the market had declined due to a levelling off in interprovincial travel. Mode of travel to all destinations, although Canadian ones dominate, showed a decrease in automobile travel and a significant increase in plane travel. This shift in mode may reflect Canadian energy concerns, however, a close examination of Traveldata's 1974 report shows that the energy crisis was never mentioned in the analysis.

As a response to the decreased oil production in Iran in October 1978, the United States again implemented a monthly gasoline allocation plan for each state. The federal authorities forced gas stations to limit hours of operation because of the severe energy supply interruption. In addition, the United States de-controlled the price of oil so that the cost of gasoline increased as well. As a result, gasoline line-ups began in California in late April and gradually spread to the east coast by late May 1979. In an attempt to control demand, odd/even day rationing was implemented in states with particular supply problems. By the end of July, people had adjusted to the odd/even day rationing, decreased driving and reduced gasoline demand and Iran had increased exports effectively ending the petroleum supply dislocations.

Again, United States' automobile tourist travel to Canada was adversely affected by the gasoline supply problems in 1979 (Figure 3.3). American tourist travel to Canada by automobile declined during each quarter of the year resulting in an annual drop of 10.4% or 906,000. New Brunswick, Québec, Manitoba and Alberta recorded an annual drop in overnight automobile entries of at least thirty percent. In the remaining provinces, Ontario, Saskatchewan and British Columbia, entries in '79 were ten percent less than the 1978 levels. The price of gasoline and the concern about its availability were most often cited as the major reasons for deterring travel in 1979.¹¹

In contrast with the first energy crisis, the price of gasoline in the United States was allowed to ~~rise~~ steadily throughout 1979. This policy of price de-control was implemented to provide the impetus for

Figure 3.3

Change in United States and Canadian Traffic by Mode Due to 1979 Energy Crisis

Variations du trafic entre le Canada et les États-Unis
selon le moyen de transport suite à la crise énergétique de 1979

United States Traffic

Trafic en provenance
des États-Unis

Base 1978 → 11,277,000
1979 → 10,909,000

Canadian Traffic

Trafic des résidents canadiens
revenant de voyages aux États-Unis

Base 1978 → 11,660,000
1979 → 10,516,000

increased domestic petroleum conservation, exploration and production. The price differential of gasoline between the United States and Canada that evolved during 1979 had a dramatic effect on international travel patterns in 1980. The difference in the price of gasoline between the two countries began in the early months of 1979 and increased throughout the year. By January 1980, a saving of approximately 50 cents per gallon could be attained by United States residents buying gasoline in Canada. The exact amount of the saving for U.S. residents depends on the type of gasoline bought (leaded or unleaded and octane levels), service station (self-serve or full-service) and inherent regional pricing differences in this country. This American demand for Canadian gasoline resulted in dramatic increases in same-day U.S. vehicle entries beginning in the fall of '79 and continuing through 1980.¹²

Figure 3.4 graphically displays the potential saving for United States residents buying gasoline in Canada and the growth in same-day vehicle entries during the same period. A saving of over 40 cents per gallon was required to produce some truly staggering increases in the traffic. This development resulted in 12.4 million United States' vehicles entering Canada and staying less than twenty-four hours during 1980, 52% above the 1979 total of 8.1 million vehicles. On a provincial basis, the increase in vehicle entries depended on two factors: (i) the size and distribution of the United States population, and (ii) the distance this population is from the Canada - United States border. Due to these factors, during 1980, Ontario recorded the largest, actual increase in same-day vehicle entries (3.5 million), New Brunswick was second (300,300), Quebec third (220,300) and British Columbia fourth

Figure 3.4

United States Same Day Vehicle Entries and the Saving for United States Residents Buying Gas in Canada

Nombre de véhicules des États-Unis entrant pour un jour seulement et l'épargne réalisée par les résidents américains achetant de l'essence au Canada

(152,000). Because of the sparse population and greater distances involved south of the Prairie Provinces, their same-day vehicle entries were of a much smaller magnitude (31,000 in Manitoba and 11,600 in Alberta) with Saskatchewan actually recording a slight decline of 1,900 vehicles (Figure 3.5).

The dramatic increase in the number of Americans visiting Canada primarily to purchase gasoline proved to be an unexpected, complicated and politically sensitive aspect of the second energy crisis. The media found the prospect of American "gasoline excursionists"¹³ consuming a sizeable portion of this finite resource to merit front-page treatment. When it was realized that due to this country's domestic energy pricing structure, Canadians were in effect subsidizing this consumption, the topic received even more attention. Every gallon of gasoline sold in Canada is subsidized by the federal treasury by approximately eleven cents. At the same time, provincial coffers receive an input from each gallon purchased through their provincial road tax. Since this tax varies across the country - from zero in Alberta to 27 cents in Newfoundland - the net result is that Canadians are still assisting Americans buying gasoline in this country.

The flood of gasoline excursionists had its biggest impact on the cities and towns along the Canada - United States border. Residents of these communities encountered line-ups at banks as Americans changed their money, at the best exchange rates, and then at the gas stations as the foreign residents filled up their tanks. Service station owners

Figure 3.5
 Percent Change in United States Same Day
 Vehicle Entries by Province, 1980
 Variations en pourcentage dans le nombre de véhicules des États-Unis
 entrant pour un jour seulement selon la province, 1980

were delighted with the turn of events as were most other merchants in these communities who benefited by the increased expenditures by the visitors.

The critical question for federal and provincial energy and tourism officials was whether this trend should be deterred in any way. The increased demand for petroleum by United States residents was significant in its own right, however, compared to the increase in domestic demand, it was only marginal. Any proposed plan to deter gasoline excursionists would have been cumbersome to implement, unpopular with those who had to administer it, Canada Customs, and generally unattractive to government tourism officials and the industry in general. Government officials opted to wait and see how the situation would evolve during the summer of '80, before implementing any measures which might constitute interference with business, even on a limited scale. No action had been taken as of December 1980, but the phenomenon persists and will continue to do so as long as the price of gasoline is substantially different between the two countries.

As in '74, commercial traffic from the United States increased during the second energy crisis of '79 (Figure 3.3). This gain, however, was in line with a trend established since early '77. During the third quarter of 1979, when automobile tourist traffic fell by 772,000, the mass modes increased by only 76,000 customers. Throughout the year, load factors for air, bus and rail were at record levels and commercial services strained to meet the increased demand.

Canadian automobile tourist flows to the United States during 1979 were dramatically altered by the petroleum supply problems south of the border. In the third quarter, the prime automobile vacation season, Canadian tourists returning by auto from the United States declined by 20% over 1978. The 2 million re-entries recorded in the July-September period of '79 was the lowest volume recorded since 1972 - the first year of the present system of enumeration. Although automobile tourist travel from the U.S. had been declining from the second quarter of 1978, the magnitude of the decline encountered in '79 was clearly energy related. Over the year, only 6.8 million resident tourists returned from the United States by automobile, 1.5 million less than in 1978.

In contrast to 1974, commercial modes failed to gain from this significant decrease in Canadian automobile travel to the United States. Plane re-entries were up by only 11% in '79 - an expansion in line with the general overall trend of the past few years. Overnight bus returns actually declined (9%) in 1979, continuing a trend which had begun in the middle of 1978. The shifts in mode were reflected in shifts in destination patterns. Decreases in the automobile traffic hurt nearby destinations in the States while long-distance locations held their own due to continued growth in plane travel.

A direct comparison of Figures 3.2 and 3.3 shows some interesting observations. First, total American tourist traffic (identified as Base on the figures) in 1974 was much greater than the reverse Canadian flow. By 1979, both bases were almost identical. The reasons for this

~~occurrence will become~~ evident in Section B. Second, the first energy crisis had a larger impact on Canadian automobile travel than American; while during the second energy incident the reverse was true. Finally, the commercial modes seemed to have had better success in attracting those residents who would have travelled by car in 1974 than in '79 for both populations.

The second energy crisis produced abrupt changes in international travel patterns between ~~Canada~~ and the United States. These shifts in volumes were actually beneficial in terms of Canada's travel deficit. Although the number of American tourists decreased by six percent, total receipts (including international passenger fares to Canadian carriers) increased by 14% to \$1,881 million. This rise in spending is primarily due to inflation and higher spending per trip as the length of the trip (measured by average number of nights) increased only slightly. At the same time, the drop in Canadian visitor travel to the United States caused payments to fall from \$2,553 million in 1978 to \$2,457 million in 1979. The combination of these two events caused Canada's travel deficit with the United States, which had been increasing since 1974, to decrease dramatically (36%). Canada's travel deficit fell from \$903 million in 1978 to \$576 million in 1979.

The number of overseas visitors continued to increase in dramatic fashion through 1979 surpassing all previous levels. Total entries reached the 2.0 million mark - excluding excursionists (or same-day via the U.S. by land entries) the flow topped the 1.7 million figure.

This increase in the overseas market is generally attributed to the strong currency conditions compared to the dollar in a number of countries - most notably the franc, yen, and mark - and increased promotion and an extended range of travel opportunities in Canada. This trend, was substantiated in 1979 by a Laventhol and Horwath hotel guest origin survey which found an increased demand for hotel accommodation from "off-shore" visitors.

The number of Canadian residents returning from countries other than the United States had been declining steadily since the third quarter of '78. This down trend continued through 1979, resulting in the 1,809,000 re-entries being 3% below the previous year. A destination analysis of this declining trend in travel to other countries shows that Europe had experienced the largest drop in the number of Canadian visitors. In 1977, 1,068,000 residents returned from Europe. In 1978, the number enumerated dropped to 1,013,000; total re-entries from all countries, including Europe, were up by 2%. In 1979, total returns fell by 3% and the number of Canadians visiting Europe fell to 934,000. The European market share during this time decreased from 60% to 53%. The destinations which increased shares were Central America, Bermuda and the Caribbean - attesting to the popularity of winter vacations to sun spots. The depreciated dollar, decreased growth in Canadian incomes and increasing costs especially in Europe due to fluctuating exchange rates are primarily responsible for the decline in total returns. The popularity of sun spot destinations identifies the importance of psychological and sociological factors in evolving international travel patterns.

As we have seen, concern about fuel shortages and rising gasoline costs cut deeply into automobile travel to the United States in 1979. Traveldata's analysis states unequivocally that the 7% increase in domestic travel was because many Canadians chose to vacation at home - a boon to the Canadian travel industry.¹⁴ Expressed in market share terms, 62% of the vacation trips were taken exclusively within Canada, up from 58% in 1978, while only 26% were taken to the U.S. mainland down from 29% in 1978. The share to all other countries remained relatively constant at 13%. In terms of domestic travel, Traveldata claims that the increased domestic travel was due to a growth in interprovincial travel as intraprovincial trips remained constant. In terms of mode of transport for Canadian destinations, both automobile and plane travel recorded slight increases. No significant changes in distance travelled in Canada were recorded. This data suggests that the energy crisis in the U.S. deterred international travel there by Canadians and consequently domestic travel increased to the benefit of the Canadian tourist industry. Travel patterns within Canada, with some exceptions, were not significantly altered by global energy conditions.

A second source of information on domestic travel patterns in 1978 and '79 is provided by a third quarter comparison of Statistics Canada's Canadian Travel Survey.¹⁵ This data is collected by means of an interview survey of households based on the Labour Force Survey sampling frame. The first survey took place in the third quarter of 1978 and therefore provides a year-over-year comparison with 1979. An analysis of the data shows that total person-trips increased by only 2% between

July-September 1978 and '79. Total mileage increased by only 1% while mileage for non-automobile modes were up by 24%. In total, person-trips by mode by distance shows a slight shift from auto to plane travel between third quarter '78 and '79. When distances of 500 miles or more are examined, the shift is much more pronounced.

Both surveys, although not identical in their findings, do identify similar trends. Domestic travel in 1979 was found to have risen over 1978. The increase, however, was much less than what one might have expected from the decrease in travel to the United States by Canadians. Most Canadian tourist officials had hoped that residents who did not visit the U.S. would vacation at home. A number of reasons have been postulated to explain this trend. First, it has never been shown that domestic and international vacations are totally substitutable. Second, the decrease in international trips may be explained by a slight drop in the number of trips per person - the foreign destination having been the second or third trip. Third, swimming pool sales increased significantly, as they had in 1974, as concern about the availability of gasoline encouraged consumers to substitute pools for travel.¹⁶

The two critical periods of decreased global petroleum supply and increased prices had mixed effects on the demand element of the Canadian tourist industry. At the international level, significant alterations in travel patterns were obviously energy related. Tourist travel between Canada and the United States, which is primarily by automobile, was severely dampened in both incidents. A shift in mode was observed

but it was of slight proportions compared to the magnitude of the decrease in automobile travel. The most recent crisis has produced a gasoline price differential between the two countries that has had a dramatic impact on United States same-day automobile entries through 1980. Concerning domestic demand, the available data shows that the two crisis incidents had a negligible affect on patterns of travel within Canada. The slight increase in domestic travel recorded in 1979 was generally felt to be a reaction to the decrease in travel to the U.S. The two surveys identified slight shifts in domestic travel patterns but nothing in comparison to the magnitude experienced at the international level. In both 1974 and 1979 Canadians were spared the experience of gasoline shortages and dramatically increased prices. Therefore, it is not totally unexpected that domestic travel pattern exhibited no great impact by the global energy crises. Traveldata's figures show interprovincial or long-distance travel to be up in 1979. The Canadian Travel Survey's detailed tables outlining destinations as a function of distance from origin by mode showed no discernable shifts in distribution between the third quarter of 1978 and '79.

B. Adjustment Period - Demand

This period of time, from 1975 to the third quarter of 1978, is characterized by the industrialized nations attempts to manage their economies in light of increased costs. The developed countries recovered from the first post-energy crisis recession of '75 by mid-1976. Their collective economies expanded through the next two

years as the real cost of energy declined following the lead of the U.S. dollar. High rates of inflation and unemployment, two traditionally mutually exclusive phenomena, also plagued the developed world as increased energy costs filtered through their economies.

Travel patterns between Canada and the United States during this period were greatly influenced by the changing economic conditions in each country. As previously noted, the post-energy crisis recession was particularly severe in the United States. By 1976, the American government had taken steps to expand the economy (it was also an election year), aided by a continued decline in the real cost of energy. Canada, on the other hand, was able to isolate herself from the global recession of 1975 but paid the price in increased inflation rates and a decreased competitive position in the world market. By 1977 and '78, inflation remained a problem while economic growth began to falter. These trends were reflected in changes in real incomes and the performance of the Canadian dollar in the world currency exchange markets. Concerning incomes, large gains were recorded in the first half of the decade but the growth trend leveled off after 1976. The Canadian dollar was valued at slightly more than the U.S. dollar in the middle of 1976 but it then declined steadily through '77 and '78 and stabilized at about 15 cents below par by 1979. It has remained there with only slight fluctuations ever since.

The performance of the Canadian economy in terms of costs and incomes, has had a significant effect on travel patterns between the United States and Canada. In many ways, the energy crisis adjustment period has had a much larger and more detrimental impact on the Canadian tourist industry than the two periods of supply disruptions and increased prices. An examination of the travel patterns between the two countries identifies the inherent truth of this statement (Figure 3.6).

Automobile tourist traffic from the United States declined steadily from 1975 to 1978, the period under question (Table 3.1). A slight increase was recorded in the first half of 1975 but only because of the dramatic decrease which had occurred in the previous crisis year. Entries by automobile declined by 2% in 1975, 8% in '76 and 3% in '77 and '78. The large decline (8%) recorded in 1976 was generally attributed to the U.S. Bicentennial Celebrations and election activities occurring during that year. The decreases of 1977 and '78, however, suggested that more serious problems were responsible for this trend. The decline in the American automobile market actually began in 1974 and continues to be a problem for Canadian tourism planners today. Annual automobile entries have fallen from 11.2 million in 1973 to 8.7 million in 1978 (and 7.8 million in 80). An analysis of the available data over the past decade shows that the declining American market is mainly from the regions which border on Canada. Population shifts to the south and south-west United States may be factors responsible for this trend of decreasing automobile tourist travel to Canada. Finally, this drop in traffic has been concentrated in the third quarter of the year - the prime tourist season in Canada.

Figure 3.6

**United States Visitors to Canada and Canadians Returning
from the United States (one or more nights only)**

**Nombre de visiteurs américains venant au Canada et
nombre de Canadiens revenant de voyages aux États-Unis*
(une nuit ou plus seulement)**

Non-automobile travel to Canada was also impacted by the energy crisis adjustment conditions in the United States. The recession of '75 resulted in a decline in non-automobile tourist entries that carried on through 1976 but at half the rate of decrease. By 1977, mass modes tourist travel had turned around and recorded an annual increase of five percent. Significant increases were enumerated in each of the four quarters of the year. The growth in this market continued during '78 and counteracted, to some extent, the declining automobile tourist entries. Since automobile entries are the majority, albeit a declining one, total tourist entries declined steadily from 1975 to '78. Although boat, rail and bus entries are included in the non-automobile volumes, the category is dominated by plane travel. Section D outlines the evolution of the airline industry in the United States which mirrors the trends of these flows.

The economic evolution of Canada and the United States during the energy crisis adjustment period had entirely the opposite effect on Canadian travel patterns than the aforementioned American experience. The total number of Canadian tourists returning from visits to the United States rose by 14% in '75, 11% in '76 and 8% in 1977 (Table 3.2). In 1975, automobile and non-automobile re-entries increased by 17 and 8 percent respectively. In 1976, the growth in automobile returns fell to 11% while non-automobile international travel increased at nearly double the rate of the previous year. By 1977, the expansion in the automobile market continued to rise at a reduced rate. During the fourth quarter of the year, auto returns actually fell by 4%, the first drop in twelve quarters and a foreboding of their performance during

'78. Commercial modes rose by thirteen percent in '77 and continued to increase in 1978, but at half the growth levels. Again, plane travel dominates, this category of travel and the evolution of the Canadian airline industry will be detailed in Section D.

The trends of decreasing American tourist traffic coupled with increasing travel by Canadians to the United States resulted in some alarming consequences in terms of the travel account. Between 1975 and '78, receipts from the U.S. increased, by 23% from \$1,337 million to \$1,650 million. At the same time Canadian payments jumped from \$1,587 million to \$2,553 million, an increase of 61% in four years. The deficit between the two countries increased from \$250 million to \$903 million, with Canada being the debtor. The increasing deficit on the U.S. account pulled the entire travel deficit down which in turn adversely affected Canada's Current Account situation. The staggering increase in the travel deficit piqued the interest of researchers as well as the media into Canadian international travel trends of the last decade.

Both demand and supply factors played significant roles in shaping the international travel patterns of the last decade. Only demand factors will be considered at this time as the supply factors will be reviewed in Section F and Section D in the case of transportation companies. The two most important demand factors which influence travel and tourism - international or domestic - are income and comparative prices. Travel demand is elastic to income so that the share of tourism

expenditures increases with a rise in income.¹⁷ After incomes, relative prices are most important due to the high substitutability between alternative destinations. Relative prices, taking into account fluctuating exchange rates and income growth in Canada and the United States help explain the documented travel patterns between the two countries.

Table 3.3

Rate of Change in Real Income per Person over 15 Years, 1971-78¹⁸

	(Average % change from previous year)			
	<u>1971-72</u>	<u>1973-74</u>	<u>1975-76</u>	<u>1977-78</u>
Growth in real disposable income	6.5	5.3	3.3	1.1

Source: Economic Council of Canada, Two Cheers for the Eighties, Ottawa, 1979, Table 1-5, p. 7.

As shown in Table 3.3, disposable income of Canadians increased rapidly in the first half of the Seventies and very little thereafter. The relationship between changes in income and their impact on international travel patterns is clouded by the idea of time lags. Vacation plans - in terms of expectations or concrete contractual agreements - are made in advance of the actual trip. Therefore, changing economic conditions, which are minor in terms of the total cost, are going to have minimal effect in the short-term. A time lag of perhaps a year is required for consumers to accurately ascertain evolving economic conditions, such as decreasing real income growth, and subsequently alter expectations and travel patterns. Keeping this in mind, Table 3.3 goes a long way in explaining Canadian travel patterns to the United States between 1975 and 1978.

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Figure 3.7 graphically shows that prices - measured by the Travel and Consumer Price Indices - increased at a faster pace in Canada than in the United States during 1975 and '76. "Thus from the point of either the Canadian or U.S. consumer the relative cost of travel in the two countries has shifted in favour of the United States since 1974".¹⁹ Not only were costs increasing faster in Canada than in the United States, during the middle '70's, but it has also been shown that the base cost of travelling in this country has been traditionally higher than that of the United States. Higher base costs in the tourism industry result from larger federal, provincial and municipal taxes, higher interest rates and construction standards in the accommodation sector. Higher airfares and until recently higher gasoline taxes and prices affect transportation costs in Canada. Finally, higher minimum wages and employees benefits throughout the industry placed Canada's travel industry in an adverse position vis a vis the United States.

It would be in error to explain the international travel patterns of this period purely in economic terms. Developments in the demographic and social characteristics of Canada's population have also had a dramatic impact. The influence of the Baby Boom, as it ages, has had a profound affect on Canada's education, labour and social structures. Increasing educational levels, more working wives and decreasing birth rates have all been positive influences on travel. In the post-industrial society, leisure time has increased tremendously and now plays as important role as work in peoples' lives. Previously, holidays,

3.2 Linkages

Movement is the basic element of tourism. The aspect of changing one's locale, as well as one's routine, is an integral part of recreation. Therefore, an analysis of flows is an essential part of the geography of travel or tourism.²⁶ The linkages, or networks - the transportations and communication industries - provide the bond between the demand and supply components of tourism. Without this link, neither component would exist. The development of computers and telecommunications networks has greatly facilitated the transfer and coordination of information - perhaps the vital element in the linkage system.

The essential element in the linkage component is distance - in terms of physical distance or time. In most cases, the distance factor can be altered, usually reduced, by an increase in the costs associated with different transportation modes. Hence, all things being equal, the distance of a journey is determined by the amount of money available.²⁷

The development of transportation technology, in terms of speed and comfort, results in travel patterns becoming more flexible and diffuse.²⁸ At the same time, more distant destinations become more accessible, subsequently altering vacation patterns. This fact has important implications for the supply side of the tourism industry as local resorts must now compete with international destinations.

especially those taken in the winter, were rationalized as being necessary of health reasons. In the '70's winter holidays are now a necessity and two vacations a year have become the norm rather than the exception. Recent studies show that people surveyed said they would rather cut back on other expenditures over travel and a short trip is better than none at all.²⁰

The economic evolution of Canada and the United States, which was energy crisis induced, had a visible effect on international travel patterns. Higher costs for travel in Canada deterred American visitors during 1976 and '77. At the same time, higher costs coupled with increasing incomes in Canada were strong incentives for greater participation for a population eager and able to travel. By 1978, economic conditions were evolving in Canada's favour (Figure 3.7) and decreases in resident re-entries from the U.S. were being recorded. It must be admitted, however, that the American tourist volumes have failed to rebound back in response to these shifting economic conditions. A fact that illustrates the importance of social factors in explaining travel demand.

Much of the evolution of travel flows between Canada and countries other than the United States has been the result of the changing economic conditions of the energy crisis adjustment period. Floating exchange rates, decreasing real costs of air transport due to structural changes, and varying rates of inflation and unemployment in different countries have dramatically altered overseas travel patterns to and from

Canada during this period (1975-1978). Structural changes forced on the airline industry by the economics of the period played a pivotal role in the evolution of travel between Canada and other countries (Section D).

The number of overseas visitors to Canada experienced an impressive, steady growth throughout this period reflecting the global trend in international travel (Figure 3.8). A slight downturn of 137,000 occurred in 1977 but only as a reaction to the record numbers who had visited during the '76 Montreal Olympics. In 1978, the volume of residents from other countries increased by 15 percent to 1.4 million.

It should not be surprising that the countries that led this growth in overseas travel to Canada were also the same ones identified as having successfully adjusted to the increased costs of 1974. Clearly the effect of exchange rates for this pattern cannot be underestimated. As previously demonstrated, the currencies of Japan, West Germany and Switzerland all appreciated significantly in relation to the U.S. dollar reducing the negative economic consequences of increased energy prices. At the same time, these shifts in exchange rates resulted in Canada becoming relatively cheaper in terms of prices. Coupled with decreasing airfares and increasing costs in Europe, North American destinations became competitive to European locales for residents of those countries. Japan also encouraged international travel to North America by its residents as a means of returning some of the dollars accumulated by that country's enormous trade surpluses. Between 1975-78, tourists from West Germany were up by 33%, Switzerland 40% and Japan 71% while

Figure 3.8

**Total Overseas Visitors to Canada and Canadians
Returning from Countries other than the United States**

**Nombre total de visiteurs en provenance de pays autres que les
États-Unis et nombre de Canadiens revenant de ces pays**

total visitors from other countries were up by 27%.²¹ Canada's major attraction for overseas visitors is its size and space, but paradoxically, it is also our major liability. How can visitors be efficiently and inexpensively moved to remote outdoor recreational facilities and between scenic and manmade attractions separated by vast distances?

An almost perfect example of the relationship between energy conditions, economics, exchange rates and ultimately the tourist industry is provided by the United Kingdom during this time. Britain's economy, currency and the tourist industry has followed a roller coaster pattern due to recent energy developments. The increased cost of OPEC products after 1974 hit Britain especially hard. Larger international payment deficits coupled with extremely high rates of unemployment caused the pound to devalue by 27% from 1973 to '76 against the Canadian dollar. Oil exploration and production in the North Sea was initiated by the major oil companies and the governments involved as a way of decreasing OPEC's monopoly and of cashing in on the higher energy prices. The injection of petroleum "dollars" into Britain's economy caused the pound to increase in value (in terms of the Canadian \$) from 1.86 in 1977 to 2.80 in November 1980. Integrated into this evolution is the United Kingdom's tourist industry, estimated to employ over 1.5 million people directly or indirectly. The industry experienced record levels in terms of visitors (12 million) and pounds (3,000 million) in 1977 - the pound was close to its lowest level and it was Jubilee year. By 1980, the pound had risen by 57% and the tourism industry is feeling the pinch. Although spending is projected to be between 3,700 and 4,000 million in

1980, the number of visitors remained at 12.5 million, the same number as in 1979. At the same time, the number of U.K. residents visiting North America, especially Miami, reached record numbers. This short, succinct history of the evolution of Britain's energy conditions and exchange rates shows clearly the relationship between these phenomena and the tourism industry and the dependant role the industry plays in this process.

The number of Canadian residents travelling to countries other than the United States also grew steadily between 1975 and 1978, (Figure 3.8). Canadian re-entries from other countries increased by 8, 11 and 12 percent respectively in 1975, '76 and '77 but by only 2% in 1978. Many of the influences cited in relation to the international travel patterns between Canada and the United States are obviously applicable in this case. The pattern is of strong demand in the early part of this period that changes to slow growth by the end. This trend is similar to the experience of the Canadian automobile tourist flow to the U.S. during the same period. The two trends are not quite synchronized suggesting a slightly longer time lag between changes in income and prices and shifts in international travel to overseas destinations.

In a detailed econometric analysis of international travel, J.R. Artus found that most flows were highly income elastic. It was determined, however, that travel from the United States and Canada to Western Europe did not seem to be influenced by income factors in the short-run. A possible reason for this unique situation may have been that short-run variations in the aggregate disposable personal income of

these countries did not accurately reflect the variations in the income of the members of the professions, businessmen and students, who represent a large factor of Canadians travelling to Europe.²² The composition and characteristics of the flow between Canada and Western Europe have changed dramatically since this study was undertaken in 1973. The expansion of overseas travel by Canadians to the mass markets has significantly strengthened the income elasticity of this flow.

An examination of domestic travel trends during this period is available from the data of Vacation Travel Patterns by Canadians 1975 through 1978.²³ Canada's share of the total vacation market took a downturn of three points to 56% in 1976. The share held at that level in 1977 and decreased slightly (1%) again in 1978. Traveldata's estimates show that this trend was matched with an increasing popularity of United States destinations while overseas and U.S. Island destinations remained fairly stable. During the period there was a noticeable decline in the importance of the automobile mode. As a consequence, the other three modes, especially plane, increased their share of the market.

Vacation Travel Patterns by Canadians provide a valuable service with their data on Canadian attitudes and perceptions during this period. By 1976, it was hypothesized that interest in the United States' vacations was a continuation of a long-term trend and was not necessarily the result of Bicentennial Celebrations. Attitudinal and perception questions in these household surveys identified that one of the reasons why the U.S. was gaining in popularity for Canadian

vacationers was due to economic factors. Canadians generally held the perception, and rightly so, that Canada was more expensive to vacation in. By 1977, as many as 50% of those surveyed believed that Canada had higher prices than the United States overall. In addition, on each of the five travel components; gasoline, airfares, accommodation, restaurants and souvenirs and gift shopping, the perception of costs in Canada were far less favourable than those south of the border.²⁴ In 1978, the devaluation of the dollar and airfare discounting in Canada appeared to have improved the perception of domestic travel costs relative to the U.S.²⁵

During the energy crisis periods of the last decade, disruptions in gasoline availability had a detrimental affect on automobile travel to and from the United States. At the same time, the slight shift from the auto to mass modes travel strained services to the limit. A drop in the number of American tourists was matched by a decrease in the volume of Canadian tourists returning from the U.S. The resulting increase in domestic travel, although not staggering, was enough to produce a profitable year in the industry (Section E). In the period between the two crises, gasoline prices in North America actually declined in real terms. It is not surprising, therefore, that travel demand patterns were not dramatically altered by petroleum conditions. The energy crisis, however, impacted on demand patterns in much more subtle ways - through the economies of Canada and the world. Fluctuations in Canada's economic environment, in terms of disposable incomes, inflation and exchange rates, altered Canada's competitive position in the global tourism market place between the years 1975 and 1978.

3.2 Linkages

Movement is the basic element of tourism. The aspect of changing one's locale, as well as one's routine, is an integral part of recreation. Therefore, an analysis of flows is an essential part of the geography of travel or tourism.²⁶ The linkages, or networks - the transportations and communication industries - provide the bond between the demand and supply components of tourism. Without this link, neither component would exist. The development of computers and telecommunications networks has greatly facilitated the transfer and coordination of information - perhaps the vital element in the linkage system.

The essential element in the linkage component is distance - in terms of physical distance or time. In most cases, the distance factor can be altered, usually reduced, by an increase in the costs associated with different transportation modes. Hence, all things being equal, the distance of a journey is determined by the amount of money available.²⁷

The development of transportation technology, in terms of speed and comfort, results in travel patterns becoming more flexible and diffuse.²⁸ At the same time, more distant destinations become more accessible, subsequently altering vacation patterns. This fact has important implications for the supply side of the tourism industry as local resorts must now compete with international destinations.

The linkage section will focus on its two major components - the automobile and airline industries. The importance of the automobile industry is obvious. The auto is recognized as the benchmark mode for most intercity passenger travel.²⁹ The other main modes rail, bus and air arrange themselves relative to the automobile depending upon route/system particulars. The auto industry is important to tourism because any design changes the industry makes to the product (the car) may ultimately affect driving patterns. The airline industry deserves special attention because of the numerous connections between the airlines and the tourism industry. It is recognized that the automobile and airline industries perform different functions. The airlines offer a service while the auto manufacturers produce a purchasable commodity. Both industries are fundamentally similar due to their respective roles in the transportation sector. Each industry will be analyzed separately, the automobile industry first, but their interrelationships should not be forgotten. The energy crisis environment of the last decade has had significant impacts on both industries in Canada, North America and throughout the world. Even the role of the telecommunications segment of the linkage component has been altered by changing energy conditions. Increased travel costs make the transfer of information an economical alternative to personal transfer for business reasons.³⁰ In the recreational context, at present it is difficult to foresee how an "image transfer" of a particular destination can compete with the experience of actually being there.

C. Crisis Period - Linkages (Auto)

New passenger car sales provide an accurate measure of the impact of the energy crisis on the auto industry. There are two current hypotheses to explain why the energy crisis incidents may adversely affect new passenger car sales. The first relates a change in buying patterns and a decrease in total unit sales to the psychological impact of real gasoline supply dislocations. The prospect of long lines at filling stations and closed service stations, forces consumers to calculate each vehicle's gasoline efficiency into the purchase price and operating costs. This results in a switch to more fuel efficient autos which are usually small in size and manufactured outside North America. As the number of miles per gallon increases, the cost per mile decreases, an important consideration as the cost of fuel rises. At the same time, sales of less energy efficient cars - usually large and produced in Canada and the U.S. - fall off.

It should be noted that any analysis of foreign and domestically produced vehicles must take into account fluctuations in the exchange rates of the major importing countries. The importance of fuel efficiency considerations and the economics of international currency rates must be evaluated in the consumer's mind at the time of purchase. The relative weight of these two factors is constantly evolving in response to one another and other external developments.

The second hypothesis asserts that the adverse economic conditions associated with the energy crisis would naturally depress new car sales. The higher prices of the new cars coupled with the increased

rates of unemployment would adversely affect new passenger car sales in North America.

The available data on passenger car sales by country of manufacture seems to confirm the aforementioned hypotheses (Table 3.4). In the United States, which felt direct impacts from both energy crises, sales for North American built cars fell significantly in both 1974 and '79. Sales for imported vehicles declined slightly during 1974 but increased dramatically during the second energy crisis. In 1979, for the first time, imported cars captured over 20 percent of the U.S. new car market.

The experience in this country has been slightly different as Canada has avoided the direct impacts of either energy crisis situation. Auto sales have reflected this fact. In 1974, total auto sales in Canada fell by three percent, due to a decline in imported car sales. During the year, 1974, the Canadian dollar fell in value versus the West German mark but gained slightly compared to the Japanese yen. In 1979, total sales in Canada surpassed the one million unit mark for the first time. Again, import sales fell, by 20%. This steep decline in import sales in Canada has been because of two major factors: They are the relatively lower fuel prices and more assured supplies here and a substantially devalued Canadian dollar, which effectively increased the delivered price of imports.³¹

New passenger car sales in 1980 tell a completely different story - more in line with trends in the United States. The dramatic shift in automobile buying preference towards small, fuel efficient cars, which are predominantly foreign occurred in Canada about one year after the United States. Subcompacts, compacts and "small speciality" cars now account for slightly over one half of the new car market.³² Between January and November 1980, compared to the same eleven months of 1979, sales of North America produced cars fell by 5% while sales of imported vehicles grew by over 45%. This increased interest in vehicles produced overseas has occurred at a time when the Canadian Dollar continues to "float" at its lowest level.

The energy crisis periods in the last decade have had significant effects on North American new car buying habits and the health of the automobile industry. The psychological impacts of supply dislocations and increased prices introduced the term "fuel efficiency" into consumers' vocabularies. The switch to small cars in Canada has lagged slightly behind the American experience. The interrelationships between the two industries, however, almost guarantees a similarity in trends.

D. Adjustment Period-Linkages (Auto)

The time period, 1975 to 1978, is described in this paper as an adjustment period when industries and consumers could alter their behaviour in light of increased energy costs. As previously noted, for a number of different reasons governments purposely held energy prices

in Canada and the United States significantly below the world level. This policy provided little incentive for North American automobile manufacturers to spend considerable amounts of money to re-tool their production for smaller cars.

The passenger automobile industry in the rest of the world, Europe and Japan specifically, has adapted better to world conditions than the industry in North America, due, in part, to historically higher gasoline prices. The European industry includes subsidiaries of General Motors and Ford, so, it seems to be not that the North American companies themselves cannot adjust. They have, however, perhaps not had to adapt to the same degree in North America as elsewhere. "The greatest single factor that has separated the North American industry from the rest of the world has been the fuel prices."³³ Had North Americans had to pay European fuel prices, then the move to more fuel efficient, smaller vehicles would have been accelerated on this continent.

Between 1975 and 1978, automobile sales in Canada and the United States increased. The success of foreign produced cars in the North American market during this time had more to do with exchange rates than energy considerations. Looked at over a 20 year span, the automobile industry seems to have reached a plateau in new car sales in the late seventies mainly due to changing demographic and social conditions. The shift away from continually increasing new car sales in the automobile industry has altered the development plans of one of North America's most important industries.

At the beginning of the 1980's, the North American automobile industry is "...in the midst of a dynamic change unmatched in its history."³⁴ The environmental and energy conservation concerns that emerged in the past decade have sparked the most massive and costly product change in any industry. These external pressures have culminated during the second post-energy crisis recession, a time of almost two years of sales drought and subsequent record corporate losses.

The magnitude of the economic pressures facing an industry that is as crucial and important in terms of jobs and contribution to GNP cannot be over-emphasized. The dislocations can be measured in the record number of lay-offs occurring in the automobile industry in 1980. The fact that Chrysler - one of the big three - is on the verge of bankruptcy for the second time in a year is a critical problem. Production in Canada by GM, Ford and Chrysler to the end of September is down almost 20% from the same period in 1979.³⁵ Decreased sales have had a prohibiting effect on the capital formation needed for the re-tooling required for the North American automobile industry to remain competitive.

The impacts of both energy crisis periods have had significant effects on the automobile industry in Canada. Since Canadian automobile manufacturers are branch plants of the North American industry, changing energy conditions in the United States were felt north of the border. In the same way, the evolution of the global automobile industry during the last decade of OPEC petroleum price increases has affected the development of the North American component through the philosophy of free trade.

The energy crises of the last decade have resulted in two major developments in the automobile industry that may affect tourism in Canada in the 1980's. First, the economic health of the industry has been threatened by changing energy conditions thus adversely affecting total economic growth in both Canada and the United States. Tourism requires a buoyant economy in which to prosper, therefore, the economic difficulties facing the automobile companies bode ill for the recreation industry in North America.

The second major development in the auto industry is the trend to small cars. The popularity of the automobile is that it is the only discrete passenger transport unit sized to comply with the basic social unit - the family. The five place North American design accommodated the majority of North American families for most of their automobile-oriented travel demands. Whether it will continue to prevail for downsized four place versions remains to be seen. The concurrent drop in the average family size may prove to be the compensating factor still favouring the auto.³⁶ How the increase in the use of small cars will alter recreational driving habits may be one of the more subtle aspects of the energy crisis' impact on the Canadian tourist industry in the '80's.

C: Crisis Period - Linkages (Airlines)

An analysis of the impacts of the energy crisis on the airline industry must utilize a number of sources of data. Traffic volumes and load factors as well as net income figures (Tables 3.5-3.8) must all be

evaluated to obtain an accurate picture of the industry over the last decade. Load factors can be deceiving if changes in capacity are not considered. Net income figures mirror the economic health of the airlines but hide shifts in operating revenue from passenger or cargo sources or sales of equipment. Finally, total passengers carried data provides a measure on the most important indicator of the industry - sales of service.

The analysis will concentrate on the Canadian scene but international developments must also be factored into a review of the last decade. Air Canada (AC), Canadian Pacific Airline (CP) and Wardair are the big three of the airline industry in this country. The smaller regional carriers must also be considered as their reactions to changing energy conditions had important implications for the entire industry.

As noted in Section A, some consumers switched from auto to plane travel during the two energy crisis incidents in the 1970's. Air Canada and Canadian Pacific, Canada's two national airlines, carried 11% more traffic in 1974 and 13% more in 1979 than in 1973 and 1978 respectively (Table 3.6). At the same time, total passengers carried, including those of the five regionals was up 12 and 14 percent respectively. This growth in traffic demand in those two years translated into the highest load factors for AC, CP and the regionals during the 70's (Table 3.7). Wardair also benefited from this increased demand for air travel and carried significantly more passengers. The growth in plane travel in 1974 for AC and CP was countered by increased operating costs and resulted in rather poor years in terms of net income (Table 3.8).

Wardair, however, recorded its highest net income so far in the decade (\$1.7 million). In 1979, the net income story was exactly the opposite. Air Canada and Canadian Pacific earned record levels of net income while Wardair experienced a \$6 million operational loss.

Two reasons are hypothesized to explain the increase in airline traffic due to the energy crisis incidents. Some automobile travellers switched to air modes (as well as other mass modes) because they were uncertain whether gasoline could be purchased all along their route. This consideration is obviously most important for those undertaking an extensive trip. A new trip strategy was developed during this period utilizing both commercial and private modes. Travellers could fly to their destination, not worrying about supplies along the way, then rent a car at the locale and be assured of an adequate petroleum supply from the rental agency.

The second reason for the switch to plane travel from the automobile relates to the speed that the increased energy costs were passed on to consumers. Increased petroleum costs were more immediately felt at the gasoline pumps after a short time lag to consume stocks on hand. Airfares, on the other hand, took a longer time to reflect the increased energy costs due to the time consuming mechanisms airlines must employ to raise tariffs. A study of the changes in the relative cost of travel between modes during the first energy crisis substantiates this point. Costs for automobile travel showed the greatest increase between September '73 and September '74 but airline costs experienced their largest rise only between March '74 and March 1975.³⁷

The energy crisis incidents had adverse effects on the airlines as well - such as jet fuel dislocations due to petroleum production disruptions. In 1979, the United States implemented a strict allocation program which, on occasion, required Canadian carriers to ferry jet fuel from Canada to United States or arrange swaps of Canadian jet fuel for U.S. aviation fuel. In the United States, airlines were generally restricted to the same amount of fuel used in 1978 or slightly less. In Tokyo, Canadian Pacific Airlines was warned that no firm could guarantee to meet all its fuel requirements for regular flights. Because of this supply difficulty, CP was forced to take on extra fuel at Hong Kong, about 2,500 miles from Japan, at considerable cost and waste.

During the second energy crisis, as in the automobile experience, the price differential for jet fuel which developed between Canada and the U.S. and rest of the world produced changes in airline travel patterns. Because jet fuel was substantially cheaper in Canada, an increase was recorded in international aircraft landings to refuel west of the Ottawa Valley. This situation eventually led to a detailed, critical report from the Committee for an Independent Canada on the need to charge competitive international fuel prices for international flights at Canadian airports.³⁸ In the federal budget of late '80, it was announced that effective in April 1, 1981, both foreign and domestic airlines on international runs would have to pay the price charged for Canadian oil on the world market.

The increased numbers of plane travellers, attracted by reduced fares, resulted in a subtle shift in the character of air travel. The airlines are evolving from a high class travel mode made up of upper income and business travellers to a truly mass mode. Increased seating capacity has led to a decline in the quality of service in the airline industry - felt primarily among its traditional customers. Airports are also strained to their limits in terms of arrivals, departures and associated services such as parking, customs facilities and baggage handling.

Related to the change in the global economic environment and the character of plane travel has been the evolution of government and associational restrictions and regulations. This shift was led by a definite move in the United States to de-regulate the airline industry as part of a larger plan to de-regulate other services such as banks, communications and the trucking industry in an attempt to lower costs and prices. The Civil Aeronautics Board (CAB), acting on behalf of the Congress and Executive, recognized the airlines' need to move into the competitive market place in an effort to fill empty seats. The fervour of de-regulation spilled over into the global industry as the CAB attempted to negotiate a "free-skies" policy at bilateral meetings and in attacks on the fare regulatory authority of the International Air Transport Association (IATA). De-regulation translated into charter-class fares. These fares were generally less than half of the regular tariff and entailed a time of payment, penalty for cancellation and minimum trip duration. The growth in traditional charter carriers, the introduction of regular charter routes such as Sir Freddie Laker's

D. Adjustment Period - Linkages (Airlines)

The Canadian airline traffic patterns generally followed the economic evolution of the 1975 - '78 period. The post-energy crisis recession of 1975 was succeeded by a gradual economic expansion from 1976 to '78. Air Canada and Canadian Pacific carried only 2% more traffic in 1975, experienced virtually no gain in '76, and increased by 2 and 4 percent respectively in '77 and '78. The regionals maintained strong growth (10%) through 1975 and then fell to only a very moderate increase in '76. Load factors of both the national and regional carriers mirrored the traffic patterns. AC and CP's passenger load factors fell to 58% in '75 and then gradually increased through the next three years.

The net income statistics of Canada's airlines were directly related to the pattern set by the traffic volumes. Air Canada and Canadian Pacific experienced their worst year in 1975 as losses totaled \$19.5 million for the two companies. From that low point the airlines improved their net income situation and attained significant profits in '78. Wardair's net income performance, running counter to AC and CP's performance, fell from record profits in 1975 to a \$2.4 million deficit in '79.

Looked at over the entire decade, the economic health of the Canada's airlines generally follows the development of the global air industry. At least superficially, the aviation industry appears to go through an evolution of five year cycles: "...1970 and 1975 were very bad years, and '80 threatens to be the worst in history. If those are valleys, we had peaks in 1973 and 78 ..."39 The five year cycle in the airline industry is directly related to the evolution of the global economy over the last decade. However the increased energy costs associated with the first crisis radically altered the cost structure of the industry.

The year 1975, marked an abrupt change in the operating environment of the world's airlines. The industry could no longer rely on technological innovation and declining real energy costs to maintain their historical profit levels. The dramatic increase in OPEC petroleum prices altered the cost structure of the airline industry. Fuel costs, as a share of total operating costs, rose from around 8% before 1973 to between 30-35% by the end of the decade.⁴⁰ In this new economic environment, the airlines had to adopt new marketing techniques; seat configurations and pricing structures to increase load factors and operating revenues. By 1978, accompanying an upturn in the global economy, millions of people were making a trip by plane and many were first-time flyers. World airlines were offering fare reductions of up to 50% in order to fill the increased seating capacity. A survey of passengers in 1978 calculated that 40% of all passengers were flying at reduced rates and many would not have flown without them.⁴¹

The increased numbers of plane travellers, attracted by reduced fares, resulted in a subtle shift in the character of air travel. The airlines are evolving from a high class travel mode made up of upper income and business travellers to a truly mass mode. Increased seating capacity has led to a decline in the quality of service in the airline industry - felt primarily among its traditional customers. Airports are also strained to their limits in terms of arrivals, departures and associated services such as parking, customs facilities and baggage handling.

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"Skybus" and the entry of the scheduled carriers into charter-class fares for a limited number of seats opened up plane travel to an expanded market. The energy crisis did not cause de-regulation, but it certainly fostered its growth.

Not surprisingly, the airline industry and regulatory authority in Canada were not isolated from the developments occurring in the United States and on the international scene. The net incomes of both Air Canada and Canadian Pacific have generally followed the five year cycle of the global industry, with the exception occurring in 1980. In contrast, the economic experience of Wardair, solely a charter carrier, ran counter to the business cycle of the scheduled airlines. The poor year of '75 for AC and CP was one of the best for Wardair as it could offer cheaper seats at a time when air travel costs were increasing. Following the lead of the CAB, the Canadian Transport Commission took action, albeit very limited, to relax the fare structure regulations for Canada's scheduled carriers on both domestic and international routes. The trend resulted in increased load factors and net income levels for Air Canada and Canadian Pacific during the latter half of the decade. To increase their load factors, the two airlines went at it by different means due to the structure and size of their equipment. Air Canada filled empty seats while Canadian Pacific's policy was to fill empty planes. Wardair's financial position was threatened by the scheduled carriers incursion into charter travel and the airline eventually had to petition the government to release it from particular regulations.

Intertwined within this evolution of Canada's first-level carriers were developments that took place among the five regional airlines - Eastern Provincial Airlines (EPA), Quebecair, Nordair, Transair and Pacific Western Airlines (PWA). Canada began the decade with five regional carriers generally providing sole intra-regional service to the five regions of the country. By the middle of the decade, acquisitions and route allocation decisions changed that situation. The government of Alberta purchased Pacific Western Airlines in August 1974 for \$36 million and transferred the head office from Vancouver to Edmonton in the summer of the following year. In 1979, P.W.A. bought Transair and eventually discontinued service east of Winnipeg to Toronto. This route was subsequently awarded to Nordair. Nordair was purchased in '78 by Air Canada, at a time when no other buyers could be found. Since then, AC has been ordered to sell their controlling interest and as of 1981, Nordair is still for sale. On the east coast, Eastern Provincial Airlines has benefited from the strong traffic demand to and from the region and the right to the cherished Toronto - Halifax, St. John's and Charlottetown routes. The acquisitions of particular carriers by other airlines, both national and regional, and the introduction of inter-regional routes has altered the structure of the regional air policy in Canada. It is recognized that these developments were part of the national process of change due to the economic, social and political events of the decade.⁴²

Many of the developments in the Canadian airline industry during the last decade were directly or indirectly energy related. Much of the strength in the regional industry came from their early entry into the

international charter market. Air Canada's purchase of Nordair allowed Canada's largest airline immediate access into the lucrative charter trade. At the same time, the regional airlines provided the services for Canada's developing petroleum industry - P.W.A. to Alberta and the Arctic and E.P.A. to Newfoundland. The dramatic increase in the price of energy has altered the cost structure of the airlines over the last decade. In response, authorities have recognized this development and have relaxed tariff regulations. Now, Canada's two international carriers offer charter-class fares on a selected number of seats to maintain load levels.

The energy crisis has had a dramatic impact on the automobile and airline industries during the 1970's. Both industries have had to deal with supply disruptions and increased real prices in their own economic environments. Threatening both industries, at the beginning of the '80s, is the conundrum of the massive re-financing that is required at a time when profit levels are at their lowest. The automobile industry must re-tool their equipment to produce the volume of small, fuel-efficient cars demanded by the North American market. The airlines must replace aging fleets with expensive fuel efficient planes, but cheap seats and most recently low load levels jeopardize this financing.

One aspect of the energy crisis does set the automobile and airline industries apart - that is, their adjustment to higher petroleum costs. Since the automobile industry in North America was temporarily protected from higher energy costs, the industry finds itself slightly out of step

with the demands of the market place. The airline industry, however, has had to continually deal with higher energy costs and has taken the necessary action to maintain an efficient operation. Even the Canadian airline industry that benefits from cheaper jet fuel prices for domestic flights, must purchase fuel at international prices outside the country.

3.3. Supply

In terms of the tourism process, two factors interact. The first concerns the tourist, however defined, who is in search of experiences and destinations. The second is the diverse spectrum of resources which provide the experiences, services and facilities sought. The supply side of the tourism industry is made up of a remarkable variety of businesses - most of them small, some of them large. In the industry are hotels and restaurants, a host of small motels, resorts and campsites. Also included are special attractions and events in Canada such as the C.N. Tower, Upper Canada Village, Calgary Stampede, Klondike Days and numerous summer fairs and winter carnivals. The provincial and national parks and historic sites are also an integral part of the tourism plant. All phases of transportation are usually thought of as part of the supply side of the industry. In this geographic analysis, however, transportation is considered as distinct from the rest of the tourism industry and has been reviewed in Section 3.2.

A number of factors complicate an accurate analysis of the supply component. According to P. Chau of the Canadian Government Office of Tourism

Information of tourism plant, however, is very spotty. Operational statistics on tourism establishments are either non-existent or sadly incomplete, due, to a great extent, to the lack of identifiable tourism items in the Standard Industrial Classifications.⁴³

Strictly speaking, it might be argued that travel and tourism do not comprise an industry in the traditional sense, because there is no distinct product or service that can be distributed. It is, in fact, a number of smaller industries, such as accommodation, food and beverage and attractions etc., all of which service more than just the travelling public. On the other hand, researchers and those in the industry, who see the individual functions as only a small part of a larger travel and tourism process, press for the industry to be recognized at the aggregate level. In an attempt to quantify the industry, the Standard Industrial Classification system has been utilized to estimate total expenditures and employment generated by travel and tourism. The success of this investigation depends on the establishment of standardized definitions, classifications and collection methods for tourism statistics at the regional and national level. Regretfully, at this time, standardization of information is not one of the industry's strong characteristics. This confusion about the tourism industry's status is at the heart of the industry's nebulous image in the mind of the public and policy makers. Although the industry "...is a response to a social need and is pervasive across Canada..."⁴⁴ in times of energy crises, the industry's importance is overlooked.

A further complication to an accurate analysis of the supply side of tourism and the energy crisis relates to the importance of localized factors on facilities and attractions. Local events can counteract or

magnify the impact of the energy crisis on the supply components, further confusing the issue. Such phenomena include the differential growth rates of regional economies, the positive impact of special events (world games and fairs) or the adverse effects of natural disasters or civil strife.

The impact of changing energy conditions is minimized on the supply components because direct consumption of petroleum derivatives is only a minor portion of total energy needs. The consumer feels the energy crisis in increased costs for heating oil and gasoline. The linkages, obviously, are impacted through gasoline and jet fuel price hikes. The supply side may only experience increased energy costs through heating, cooking and cooling bills - all of which can use non-petroleum sources of energy. A recent survey estimated that energy costs on tourist operators in rural areas of Ontario averaged between 6-10 percent while urban operators reported energy costs of between only 4-5 percent.⁴⁵ Facilities and attractions are not immune to the effects of the crisis but they are more inclined to feel the impact indirectly, by way of changes in demand and linkages, than by direct cost increases themselves.

Due to the ambiguities of much of the data of the plant, the importance of localized factors and the relative minor role of direct energy costs, the energy crisis/ tourism industry matrix designed for this paper has limited applications in an analysis of the supply component. Lessons can be learned, however, from this type of analysis, if the constraints of reality are kept in mind.

In most cases, the supply component of the tourism industry reacts to both shifts in demand pressures and changes in the transportation networks. Demand pressures determine the spatial structure of most supply facilities⁴⁶ while cultural differences in demand among countries are reflected in the corresponding supply resources.⁴⁷ Changes in transportation technology alter the distance and accessibility of destinations and resorts and play a critical role in their evolution.

An important distinction concerning supply facilities developed for the tourism industry is that they do not generally follow the same locational theories associated with other economic activity. The reason is probably due to the fact that, in the tourism industry, the consumer travels to the point of production and that the production, sale and consumption of the recreational experience is in effect identical.⁴⁸ It is this unique characteristic of the supply component of the tourism industry that makes it so adaptable for regional development in peripheral areas.

Supply facilities have been classified by examining their location in terms of demand.⁴⁹ They can be distinguished as user-oriented, resource based or intermediate areas. Each has distinct characteristics as to time of maximum use, type of activity, distance from demand and size of activity area. To explain the inter-relationships between supply and demand, principles associated with market research must be applied in attempt to understand the stages through which destination areas may evolve.⁵⁰ The rise and decline, or in some cases stabilization, in the popularity of particular destinations can be related to the

mathematical formula symbolized by the "S" curve. The distinct patterns of destination popularity are directly related to the concept of diversity - an important, but little understood, element in international and domestic tourism.

E. Crisis Period - Supply

The available data shows that during the energy crisis incidents of the last decade, the tourism industry in Canada actually benefited by the shifts in demand and linkage patterns. The gasoline uncertainties in the United States in early 1974 and '79, kept Canadians at home filling the void created by the decreased number of American visitors. To be sure, some parts of the Canadian industry suffered, but overall, it benefited from these two particular energy incidents. If Canada had experienced actual gasoline supply dislocations, as the United States did, the results might not have been the same.

During both crisis periods of the last decade, the tourism industry in the United States was particularly hard hit by the restricted sale of gasoline. The United States Travel Service estimated in 1974 that energy shortages had caused the loss of some 180,000 jobs and nearly \$200 million in business.⁵¹ Particularly hurt were the destinations and attractions generally visited on weekends and Sunday by auto. It was thought that the biggest impact of the energy crisis was on auto travel and those businesses associated with it, from attractions to accommodations to fast food chains. The Travel Service also noted that airlines, AMTRACK and bus companies benefited from the crisis. Related

to the gains in mass modes, it was thought that airport or central city accommodation were in a much better position to face the changing energy conditions.⁵²

In 1979, the Travel Service surveyed the industry to determine the impact of the second energy crisis during the second and third quarters particularly.⁵³ They measured the impact of the crisis on changes on sales and employment for five travel industry sectors. They were attractions, campgrounds/transients trailer parks, hotels/motels/resorts, rental car companies and restaurants. The data of the '79 Gasoline Travel Impact Survey show substantial losses in both travel industry sales and employment, particularly during the third quarter. Real retail sales fell dramatically during mid '79 from previous year levels. Retail sales for the entire year were also down indicating that the detrimental effects of gasoline shortages depressed travel industry business for the full year. The survey calculated that the travel industry laid off 250,000 employees in the summer of '79 in response to depressed business conditions related to gasoline shortages.⁵⁴

Fortunately, Canada has been able to avoid petroleum supply dislocations during the two crises of the 1970's. In addition the costs for petroleum in Canada have been maintained below the world level for a number of political, economic and social reasons. Due to these factors, the direct impacts of the energy crisis have been minimized, however, indirect effects have played an important part in the evolution of the industry over the last decade.

In 1974, the accommodation industry in Canada was in the middle of long range development plans at a time when increased energy prices had altered the economic environment of the globe. The industry, buoyed by the record earnings of 1973, continued to build hotels, motels and convention centers as if no end were in sight for the demand for meeting and conference facilities. "More units were built in 1974 than were built in 73 and the outlook for 75 is more of the same."⁵⁵ This factor was reflected in the occupancy rates of Canada's first class accommodation facilities (Table 3.9). The limited sample shows that the occupancy in hotels in Vancouver decreased in '74 while those in Eastern Canada increased their rates. Significant increases in the supply of rooms hid any visible effects the energy crisis might have had.

In 1979, most of the tourism industry avoided any economic set backs, as demand from domestic residents and visitors from other countries more than made up for less American demand. Occupancy rates in most major cities in Canada recorded a gain, continuing a growth trend begun in 1975. A guest origin survey by Laventhol and Horwath noted a significant increase in tourism from off-shore countries and attributed it to the cheaper dollar, cheap charter airfares and relatively cheap hotel rooms in Toronto compared with other vacation centers such as New York, Paris and London.⁵⁶ Not all aspects of the industry reported increased trade; a check of hunting and fishing lodges reported a loss of between 15-25% in U.S. visitors. It was noted that the U.S. residents who lived further away from the border were the ones cancelling their reservations.⁵⁷

Finally, the shift in travel patterns, particularly the dramatic decrease in the number of Canadians travelling to the U.S., resulted in a significant drop in Canada's travel deficit, the accepted measure of the relative health of the industry.

At the other end of the accommodation continuum to the hotels included in Laventhol and Horwath's survey are camping statistics from Ontario's Provincial Parks. The trends noted in the Hotel industry, however, are duplicated at the campsites across Ontario during 1974 and '79 (Table 3.10). Total camper nights increased during the '74 season by 4% after a rise of only 1% during the previous four years. Southern parks recorded a five percent increase in '74, reversing a four year decline. In 1979, camper nights again increased in the north and south resulting in a total gain of 5%. As in '74, the growth in camper nights altered an established four year trend of declining park utilization.

Information on camper origins for Ontario Provincial Parks is only available for the years 1976 to 1979 (Table 3.11). The data is disaggregated by the eight regions in the park system so that spatial destination trends can be identified. Interestingly, the parks with the largest percentage of American campers are in the northern regions of the province. The figures show that the three regions, North Central, Northern and Northwestern, with the highest proportion of U.S. campers, recorded significant decreases in 1979. The southwestern region, bordering on the United States increased its share of American

campers noticeably. The fact that gasoline was plentiful and cheaper in Ontario during 1979 suggests that the petroleum situation in the United States was the deterrent to travel to Canada. Figures at the provincial level indicate that the decrease in United States origins was more than offset by increased visitation by residents of other provinces - who under normal circumstances may have vacationed in the U.S.

A number of lessons are evident from the experience of the two energy crisis incidents and the supply components of the tourism industry. In the United States, where gasoline line-ups and Sunday closings were a fact of life, the tourist industry recorded decreases in sales and employment. Hardest hit were any facilities totally dependent on the auto, while services near mass mode routes or terminals actually benefited. Canada avoided any gasoline supply dislocations, so that the tourism industry was not directly affected by the crises. Indirectly, however, the situation in the United States tended to encourage more Canadians to vacation at home making up for the decreased American demand. Due to the evolution of global economics, the industry in this country was considered relatively cheap (in an economic sense), thus attracting increasing numbers of off-shore visitors. There were some areas of the industry, although, where the decline in American tourists was not matched by increased domestic and overseas visitors and these areas suffered.

incomes, inflation and unemployment rates in the United States and Canada were responsible for shifts in the tourism demand of the residents of each nation. The depreciation of the Canadian dollar, in 1977 and '78, dramatically altered this country's international competitive position. At the same time, the devaluation made it more expensive for Canadians to travel abroad, finally halting what was an increasing travel deficit.

Forward looking tourism planners, conscious of the energy crisis, are adjusting to changing conditions in terms of product development and promotion. New trends in development include a shift away from mainly highway oriented tourism plant and a greater concentration of tourist facilities and attractions in and adjacent to large urban centers. There is a growth in total destination resort complexes linked to urban centres by mass modes and a shift in the plant from rural to urban locations. In terms of promotion, greater emphasis will be placed on destination areas, package group travel and the use of mass modes. Managers should concentrate on markets familiar with group travel, e.g. Japan and West Germany, and attempts should be made to re-educate Canadians into changing their attitudes towards group travel.

In conclusion, there appears to be general agreement regarding market shifts and their implications for plant development. There is considerable disagreement, however, as to the magnitude of these shifts. Therefore, strategies should be based on a range of assumptions regarding the possible severity of future gasoline price increases or supply decreases.

United Nations' world conference on man and his environment was held in Vancouver; there were so many "no shows" that the hotels had to advertise extensively in the U.S. to try and fill the rooms. In the same way, during July and August in Montreal, the expected Olympic boom never materialized, even though over 1/2 a billion dollars were estimated to have been spent by foreign visitors at the games.⁵⁸ Montreal had the dubious distinction of having the lowest occupancy levels and highest room rates in the country. If this situation was not bad enough, the United States enacted legislation to restrict convention spending by United States citizens abroad. It has been said that this measure cost Canada between \$100-300 million over the last four years.⁵⁹

By 1976, economic conditions in Canada had made the question of price competitiveness in the tourism industry a subject of intense discussion, debate and research.⁶⁰ It was found that almost all cost components influencing the price structure of hotels and restaurants were higher in this country than in the U.S., including food and beverages supplies, wages, municipal taxes, construction and financing costs.⁶¹ These higher costs for the industry occurred at a time when the Canadian dollar was worth slightly more than its American counterpart. This situation only compounded the problem. Medium priced facilities, especially resort areas, were particularly hurt by the price differential problem.⁶²

The year 1977 brought improvements to Canadian hotel operators in most urban centers, with all but two showing increased occupancies over '76. Few hotels opened in the saturated markets in '77, except in Montreal where 1600 rooms were added, after 1700 units had entered the year before. By '78, all regions achieved occupancy levels equal or greater than those reported in 1977. Increased economic activity coupled with a decline in the Canadian dollar and a growth in domestic travel due to the introduction of in-Canada charter airfares all had a positive impact on the accommodation and tourism industry in Canada.

The aggregate occupancy data of the last decade presented here hides particular successes and failures. One "genuine Canadian success story" is that of the growth of Delta Hotels of Vancouver. Starting from six hotels in British Columbia, it now has eleven facilities across the country, with two more on the drawing board. The Chelsea Inn in Toronto, which opened in 1975, has been called a "phenomenon of the hotel industry" by analysts and has the highest occupancy rates of any large hotel in Canada. The Chelsea Inn's 96% rate is ten points higher than the occupancy level for the entire chain, an amazing level.⁶³ Each hotel is unique and each in its distinctive way fits the needs and spirit of the area it serves. Delta Inn has led the trend toward the building, in the city center, of functional hotels which eschew frills by current standards and charge reasonable rates. Delta's management feel that "...the attractions offered by major centers are bringing in the majority of people."⁶⁴

Finally, as has been pointed out, energy usually affects the lodging industry in negative ways such as raising costs and declining volumes. On the other hand, energy exploration and development has stimulated a significant amount of hotel construction in Canada. Alberta was the focus of this activity in the 1970's; Atlantic Canada appears to be the focus for the 1980's. If offshore gas and oil discoveries prove commercially viable, accommodation demand in St. John's, Newfoundland and Halifax, Nova Scotia should increase significantly.

Concerning outdoor recreation during the adjustment period, the data for Ontario Provincial Parks shows a decline in visitation by whatever measure used (Table 3.12). Total number of visitors fell from 11.1 million in 1975 to 9.6 million by '78, while total number of campers dropped by 300,000. Camper nights decreased by 27% in the north and 20% in the south during the four year period. Both demand and supply factors have played important roles in provincial park utilization trends. Changes in demand include park fee increases, changing patterns of tourism, the introduction of alcohol bans, weather conditions and increased energy prices. Among the supply factors were shorter season lengths, declining levels of park resources and a decrease in the quality of capital assets. The decrease in the average party size reflects changes in family characteristics and is important in explaining the general decline in park utilization.

In terms of camper origins, the data is only available for 1976, '77 and '78. As noted in Section E, the parks with the largest percentage of American campers were the ones classified as northern.

North Central, Northwestern, Northern and to a lesser extent, Northeastern. From 1976 to '78, the portion of campers from Ontario decreased by three percent, while out-of-province and U.S. visitors increased slightly. Therefore, the overall decline in the number of U.S. tourists recorded at the national level was not reflected in the Ontario Provincial Park system. In addition, the decrease in utilization experienced by the Parks was actually due to a drop in demand by Ontario residents.

On a broader level, researchers have identified a number of different phenomena, related to the energy crisis, affecting present and future park operations. The energy situation has initiated longer stays at parks, having a considerable impact on management strategies.⁶⁵ The size of the automobile and the cost of gasoline will probably decrease the radius of travel, especially for one day outings.⁶⁶ Parks near urban areas should expect increased demand on their facilities while those a long distance from population centers will have to rely on individual opportunities to attract campers seeking various experiences. Seasonal campsites and longer leases, especially for energy inefficient, large recreational vehicles, will change the character of parks and place new pressures on park managers.⁶⁷ These trends are occurring at a time when park services are declining, qualitatively and quantitatively, due to restricted budgets.

During the energy crisis adjustment period, the performance of the supply side of the tourist industry was directly related to the economic evolution of the country between 1975 and 1978. Changes in disposable

incomes, inflation and unemployment rates in the United States and Canada were responsible for shifts in the tourism demand of the residents of each nation. The depreciation of the Canadian dollar, in 1977 and '78, dramatically altered this country's international competitive position. At the same time, the devaluation made it more expensive for Canadians to travel abroad, finally halting what was an increasing travel deficit.

Forward looking tourism planners, conscious of the energy crisis, are adjusting to changing conditions in terms of product development and promotion. New trends in development include a shift away from mainly highway oriented tourism plant and a greater concentration of tourist facilities and attractions in and adjacent to large urban centers. There is a growth in total destination resort complexes linked to urban centres by mass modes and a shift in the plant from rural to urban locations. In terms of promotion, greater emphasis will be placed on destination areas, package group travel and the use of mass modes. Managers should concentrate on markets familiar with group travel, e.g. Japan and West Germany, and attempts should be made to re-educate Canadians into changing their attitudes towards group travel.

In conclusion, there appears to be general agreement regarding market shifts and their implications for plant development. There is considerable disagreement, however, as to the magnitude of these shifts. Therefore, strategies should be based on a range of assumptions regarding the possible severity of future gasoline price increases or supply decreases.

Table 3.1. Tourist Traffic to Canada
('000s)

Year	U.S. Residents Auto 1+	Non-Auto 1+	Total	Overseas Visitors 1+	Total Visitors
<u>1972</u>					
1Q	823	235	1,058	63	1,121
2Q	2,584	525	3,109	191	3,300
3Q	6,327	792	7,119	355	7,474
4Q	1,417	364	1,781	136	1,917
Total	11,151	1,916	13,067	745	13,812
<u>1973</u>					
1Q	845	316	1,161	80	1,241
2Q	2,755	631	3,386	250	3,636
3Q	6,084	1,041	7,125	437	7,562
4Q	1,481	370	1,851	163	2,014
Total	11,165	2,358	13,523	930	14,453
<u>1974</u>					
1Q	751	353	1,104	98	1,202
2Q	2,470	699	3,169	285	3,454
3Q	5,618	1,074	6,692	499	7,191
4Q	1,332	438	1,770	186	1,956
Total	10,171	2,564	12,735	1,068	13,803
<u>1975</u>					
1Q	814	351	1,165	115	1,280
2Q	2,503	651	3,154	321	3,475
3Q	5,404	1,070	6,474	533	7,007
4Q	1,293	413	1,706	195	1,901
Total	10,014	2,485	12,499	1,164	13,663
<u>1976</u>					
1Q	724	311	1,055	114	1,169
2Q	2,299	633	2,932	360	3,292
3Q	5,010	1,089	6,099	685	6,784
4Q	1,178	394	1,572	200	1,772
Total	9,211	2,427	11,658	1,359	13,017

Table 3.1 - Concluded Tourist Traffic to Canada
('000s)

Year	U.S. Residents		Total	Overseas Visitors 1+	Total Visitors
	Auto 1+	Non-Auto 1+			
<u>1977</u>					
1Q	644	336	980	112	1,092
2Q	2,261	694	2,955	348	3,303
3Q	4,865	1,075	5,940	566	6,506
4Q	1,125	451	1,576	196	1,772
Tptal	8,895	2,556	11,451	1,222	12,673
<u>1978</u>					
1Q	694	354	1,043	119	1,167
2Q	2,165	663	2,828	338	3,216
3Q	4,680	1,128	5,808	681	6,489
4Q	1,134	459	1,593	224	1,817
Total	8,673	2,604	11,277	1,412	12,689
<u>1979</u>					
1Q	634	348	982	129	1,111
2Q	2,097	808	2,905	473	3,378
3Q	3,908	1,473	5,381	828	6,209
4Q	1,128	513	1,641	246	1,887
Total	7,767	3,141	10,909	1,676	12,585

Source: Statistics Canada, Travel Between Canada and Other Countries,
Ottawa, Cat. No. 66-201, 1972-79.

Table 3.2 Tourist Traffic Returning to Canada
('000s)

Year	Cdns. from U.S.		Total	Cdns. from Overseas	Total Returning Residents
	Auto 1+	Non-Auto 1+			
<u>1972</u>					
1Q	959	472	1,431	245	1,676
2Q	1,567	438	2,005	250	2,255
3Q	3,343	392	3,735	409	4,144
4Q	1,158	367	1,525	190	1,715
Total	7,027	1,669	8,696	1,094	9,790
<u>1973</u>					
1Q	1,031	557	1,588	339	1,927
2Q	1,534	475	2,009	284	2,293
3Q	3,094	477	3,571	451	4,022
4Q	1,082	423	1,505	218	1,723
Total	6,741	1,932	8,673	1,292	9,965
<u>1974</u>					
1Q	725	704	1,429	379	1,808
2Q	1,325	557	1,882	278	2,160
3Q	3,060	539	3,599	434	4,033
4Q	1,165	481	1,646	221	1,867
Total	6,275	2,281	8,556	1,312	9,868
<u>1975</u>					
1Q	1,164	787	1,951	400	2,351
2Q	1,591	600	2,191	314	2,505
3Q	3,335	559	3,894	459	4,353
4Q	1,264	512	1,776	247	2,023
Total	7,354	2,458	9,812	1,420	11,232
<u>1976</u>					
1Q	1,170	870	2,040	464	2,504
2Q	1,822	685	2,507	356	2,863
3Q	3,749	663	4,412	481	4,893
4Q	1,426	570	1,996	281	2,277
Total	8,167	2,788	10,955	1,582	12,537

Table 3.2 - Concluded Tourist Traffic Returning to Canada
('000s)

Year	Cdns. from U.S.		Total	Cdns. from Overseas	Total Returning Residents
	Auto 1+	Non-Auto 1+			
<u>1977</u>					
1Q	1,282	995	2,277	528	2,805
2Q	2,048	782	2,830	394	3,224
3Q	4,014	736	4,750	560	5,310
4Q	1,363	625	1,988	295	2,283
Total	8,707	3,138	11,845	1,777	13,622
<u>1978</u>					
1Q	1,387	1,080	2,467	5,545	3,012
2Q	1,859	829	2,688	412	3,100
3Q	3,839	729	4,568	557	5,125
4Q	1,262	675	1,937	295	2,232
Total	8,347	3,313	11,660	1,809	13,469
<u>1979</u>					
1Q	1,134	1,113	2,247	538	2,785
2Q	1,717	976	2,693	385	3,078
3Q	2,752	826	3,578	546	4,124
4Q	1,246	752	1,998	288	2,286
Total	6,849	3,667	10,516	1,757	12,273

Source: Statistics Canada, Travel Between Canada and Other Countries,
Ottawa, Cat. No. 66-201, 1972-79.

Table 3.4

North American Passenger Car SalesUnited States
(units in thousands)

Year	Total Sales	N. American Manufactured	Imports	Imports as % of Market
1970	8,405	7,119	1,285	15.3
71	10,250	8,681	1,568	15.3
72	10,950	9,327	1,623	14.8
73	11,439	9,676	1,763	15.4
74	8,867	7,454	1,413	15.9
75	8,640	7,053	1,587	18.4
76	10,110	8,611	1,498	14.8
77	11,185	9,109	2,076	18.6
78	11,312	9,312	2,000	17.7
79	10,671	8,341	2,329	21.8

Canada
(units in thousands)

Year	Total Sales	N. American Manufactured	Imports	Imports as % of Market
1970	640	n/a	n/a	
71	781	n/a	n/a	
72	859	654	205	31.4
73	971	783	188	24.0
74	943	797	146	17.9
75	989	836	154	18.4
76	946	793	153	19.3
77	991	798	194	24.3
78	989	816	173	21.3
79	1,003	864	139	16.1

Year to Date: January-November
Percent Change 1980 over 1979

Total Sales	N. American Manufactured	Imported
+1.8	-4.9	+46.2

Source: Motor Vehicles Manufacturers Association, Facts and Figures '80.
 Statistics Canada, New Motor Vehicle Sales, Ottawa, Cat. No.
 63-007, Table 1, 1970-80.

Table 3.5

Airline Passengers Carried
(millions)

Year	Air Canada/ Canadian Pacific ^a	Five Regionals	Total	Wardair ^b (000)
1970	8.9	1.8	10.7	167
71	9.0	2.3	11.3	195
72	10.0	2.6	12.6	204
73	11.8	3.5	15.3	285
74	13.1	4.1	17.2	346 ^c
75	13.3	4.5	17.8	527
76	13.3	4.7	18.0	545
77	13.6	8.2	21.8	634
78	14.2	5.8	20.0	758
79	16.1	6.6	22.7	1,108

a. Includes passengers carried to international and domestic destinations.

b. Includes inbound and outbound passengers carried on Advance Booking Charters and Inclusive Tour Charters to international destinations.

c. Break in the series.

Source: Statistics Canada, Transcontinental and Regional Air Carrier Operations, Ottawa, Cat. No. 51-007, Table 2, 1970-80.

Table 3.6

Changes in Numbers of Passengers Carried
(percent)

Year	Air Canada/ Canadian Pacific	Five Regionals	Total	Wardair
1971	1	28	6	17
72	11	13	12	4
73	18	35	21	40
74	11	17	12	21
75	2	10	3	53
76	-	4	1	4
77	2	74	21	16
78	4	-29	-8	20
79	13	14	14	46

Table 3.7

Passenger Load Factors
(percent)

Year	Air Canada/ Canadian Pacific	Five Regionals
1970	56.0	51.9
71	54.8	46.8
72	64.6	49.0
73	63.0	51.8
74	65.7	50.8
75	58.4	49.2
76	60.6	50.0
77	63.3	54.2
78	64.1	55.4
79	67.0	55.0

Source: Statistics Canada, Transcontinental and Regional Air Carrier Operations, Ottawa, Cat. No. 51-007, Table 2, 1970-80.

Table 3.8

Net Income
(\$ million)

Year	Air Canada	Canadian Pacific	Wardair
1970	-1.1	1.0	-1.0
71	1.7	2.1	0.6
72	8.6	5.2	0.3
73	6.1	4.2	0.9
74	-9.2	2.4	1.7
75	-13.1	-6.4	4.7
76	-10.5	-9.8	1.0
77	20.0	3.3	3.8
78	47.5	20.0	5.4 ^b
79	55.4	13.1	-2.4
1980	58.0 ^a		

a. Estimated

b. Comprised of a \$6 million operating loss and a \$11 million sale of equipment.

Source: Annual Reports.

Table 3.9

Canadian Hotel
Occupancy Rates 1970-79

City	1970	71	72	73	74	75	76	77	78	79
Vancouver			72	74	66	62	61	63	68	76
Calgary					71	67	71	78	78	80
Edmonton					67	62	70	74	74	70
Winnipeg		60	65	70	68	-	66	65	65	66
Toronto	72	67	67	68	74	65	62	65	71	76
Ottawa	69	68	68	68	71	68	66	69	72	70
Other Ont.	70	61	61	62	62	57	58	58	60	62
Montréal		72	72	76	79	69	64	62	61	65
Quebec						58	62	64	68	74
Halifax/Dartmouth						54	58	61	67	70

Source: Laventhol and Horwath, Trend of Business in Hotels, 1970-1979.

Table 3.10

Ontario Provincial Parks
Camper Nights 1970-79
(000)

Year	Northern	Southern	Total
1970	822	2,702	3,524
71	931	2,852	3,783
72	800	2,492	3,292
73	915	2,633	3,547
74	936	2,766	3,702
75	1,064	2,915	3,979
76	1,074	2,601	3,767
77	942	2,630	3,572
78	778	2,338	3,116
79	791	2,469	3,260

Source: Ontario Ministry of Natural Resources, Ontario Provincial Park Statistics, Toronto, 1970-79.

Table 3.11

Camper Origins
from U.S.A. and Other Countries
1976-1979
(percent of total)

Region	1976	1977	1978	1979
Algonquin	12	7	8	9
Central	11	8	8	7
Eastern	7	6	7	6
North Central	32	33	34	27
North Eastern	18	15	16	18
Northern	15	25	29	17
Northwestern	29	35	32	25
Southwestern	23	14	14	19
Province	17	18	18	16

Source: Ontario Ministry of Natural Resources, Ontario Provincial Park Statistics, Toronto, 1976-79.

Table 3.12

Ontario Provincial Park Statistics
1972-79

Fiscal Year	Number of Visitors	Average Party Size	Number of Campers	Number of Camper Nights	Length of Stay	Origins		
						Ontario	Other Prov.	Out-side Canada
	(000,000)		(000,000)	(000,000)		(%)	(%)	(%)
1972	12.3	3.4	1.5	3.3	2.2			
73	12.1	2.8	1.6	3.5	2.2			
74	11.0	2.8	1.6	3.7	2.3			
75	11.1	2.6	1.6	4.0	2.5			
76	10.7	3.0	1.5	3.8	2.5	75	8	17
77	10.4	2.5	1.4	3.6	2.5	73	9	18
78	9.6	2.6	1.3	3.4	2.2	72	10	18
79	5.2 ^a	2.6	1.4	3.3	2.3	72	12	16

a. Change in system of enumeration.

Source: Ontario Ministry of Natural Resources, Ontario Provincial Park Statistics, Toronto, 1972-1979.

FOOTNOTES FOR CHAPTER 3

The Impact of the Energy Crisis on the Tourism Industry in Canada

- (1) Lisle S. Mitchell, "The Geography of Tourism An Introduction", Annals of Tourism Research, July/Sept. 1979, p. 238.
- (2) D.G. Pearce, "Towards a Geography of Tourism", Annals of Tourism Research. July/Sept. 1979, p. 248.
- 3.1 Demand
- (3) see S. Schulmeister, Tourism and the Business Cycle, Vienna, Austrian Institute of Economic Research, 1979, pp. 5-141.
- (4) see S.C. Plog, "Why Destination Areas Rise and Fall in Popularity", The Cornell Hotel and Restaurant Administration Quarterly, February, 1974, pp. 55-58.
- (5) after M. Clawson and J.L. Knetsch, Economics of Outdoor Recreation, Baltimore, J. Hopkins U. Press, 1966, p. 43 and Geoffery Wall, Recreational Land Use in Southern Ontario, Waterloo, Dept. of Geography Publication, Series No. 14, 1979, p. 63.
- (6) Geoffery Wall, p. 63.
- (7) Also referred to as "other countries" and "overseas countries".
- (8) Please refer to Tables 3.1 and 3.2 at the end of Chapter 3 for international travel flows. Tables 3.1 and 3.2 are derived from Statistics Canada, Travel Between Canada and Other Countries, Ottawa, Cat. No. 66-201, 1972-1979.
- (9) J.E. Rosenow and G.L. Pilsipher, Tourism: the good, bad and the ugly, Lincoln, Century Three Press, 1979, p. 234.
- (10) Canadian Government Office of Tourism, Vacation Travel by Canadians, Toronto, Traveldata Ltd., 1974, p. 3.
- (11) Travel Pulse 1979-80, Travel and Tourism Consultants International in co-operation with Oxotoby-Smith, Inc., 1979, p. 41.

- (12) Vehicles, as opposed to people, are the unit of measurement here because it is the consumption of gasoline that is really the issue.
- (13) An excursionists is defined as an international visitor who stays less than twenty-four hours, as opposed to a tourist who stays at least one night.
- (14) Canadian Government Office of Tourism, Vacation Travel by Canadians in 1979, Toronto, Traveldata Ltd., 1979, p. 5.
- (15) Canadian Government Office of Tourism, Canadian Travel Survey, CTS Research Bulletin No. 4, November 1980, pp. 1-4.
- (16) Dan Westall, "Gasoline price crunch creates a big wave of swimming pool sales", Globe and Mail, 7 July 1979, p. B16.
- (17) A. Saurin, "Economic Determinants of Tourist Demand: A Survey", Tourist Review, Berne, No. 1, Jan. - March, 1978, p. 2.
- (18) Economic Council of Canada, Two Cheers for the Eighties, Ottawa, Supply and Services Canada, 1979, Table 1-5, p. 7.
- (19) C.A. Barrett and A. London, "The Canadian Balance of Payments: Canada's Growing Travel Deficit", The Canadian Business Review, Ottawa, Summer, Vol. 4, No. 3, 1977, p. 39.
- (20) J. Gerald Bailie, "Recent International Travel Trends in Canada", The Canadian Geographer, Vol. xxiv, No. 1, Spring 1980, pp. 13-21.
- (21) Statistics Canada, Travel Between Canada and Other Countries, Ottawa, Cat. No. 66-201, 1975-1978.
- (22) J.R. Artus, "An Economic Analysis of International Travel", International Monetary Fund Staff Papers, Vol. xix, No. 3, November 1973, p. 593.
- (23) Canadian Government Office of Tourism, Vacation Travel by Canadians, Toronto, Traveldata Ltd., 1975-78.
- (24) Ibid., 1977, p. 20.
- (25) Ibid., 1978, p. 20.

3.2 Linkages

- (26) D.G. Pearce, "Towards a Geography of Tourism", Annals of Tourism Research, July/Sept. 1979, p. 253.
- (27) I. Matley The Geography of International Tourism, A.A.G. Resource Paper, No. 76-1, 1976, p. 16.

- (28) see F. Rajotte, "The Different Travel Patterns: Spatial Framework of Recreation and Tourism", in Tourism as a Factor in National and Regional Development, I.G.U. Working Group, Occasional Paper #4, September 1974, pp. 43-52.
- (29) Science Council of Canada, "Preface", Opportunities in Canadian Transportation, Proceedings of Intercity Passenger Transport Conference, Report #1, May 1979, p. 8.
- (30) see A.M. Khan, "Travel vs Telecommunications: Current Understanding", High Speed Ground Transportation Journal, Vol. 10, No. 3, Fall 1976, pp. 203-216.
- (31) N.B. MacDonald, "Canadian Automobile Industry", Opportunities in Canadian Transportation, Auto as Mode/Industry, Science Council of Canada, Report #2, October 1979, p. 91.
- (32) N.B. MacDonald, "Auto Industry Prospects", Opportunities in Canadian Transportation, Intercity Passenger Transport Conference, Science Council of Canada, Report #5, May 1980, p. 213.
- (33) A.B. MacDonald, "The Automobile Industry", Opportunities in Canadian Transportation, Auto as Mode/Industry, Science Council of Canada, Report #2, October 1979, p. 81.
- (34) Motor Vehicle Manufacturers Association, Facts and Figures '80, 1980, p. 1.
- (35) N.B. MacDonald, The Future of the Canadian Automobile Industry in the Context of the North American Industry, Science Council of Canada, Working Paper #2, November 1980, p. 11.
- (36) A. Blair, "The Emergence of the Auto as a Free Vote Mode", Opportunities in Canadian Transportation, Science Council of Canada, Report #2, October 1979, p. 27.
- (37) S. Cook and Douglas C. Frechtling, "The Changing Cost of Travel in the United States", Journal of Travel Research, Vol. xiv, No. 3, Winter 1974, p. 4.
- (38) F. Auf-der Maur, A Report on the Need to Charge Competitive International Fuel Prices for International Flights at Canadian Airports, Montreal, Committee for an Independent Canada, Report #2, May 1980, pp. 1-44.
- (39) D.G. Hammarskjöld, "Fuel Problems make airlines wiser", Canadian Travel Courier, 2 October, 1980, p. 7.
- (40) Ibid.
- (41) "The 1980s Generation", Time, 14 August, 1978, p. 34.

- (42) Jill Wilks, "Canada's airlines expect 'rough cut air policy' soon", Canadian Travel Courier, 13 November, 1980, p. 37.

3.3 Supply

- (43) Peter H.N. Chau, Framework for Classification, Prioritization and Standardization of Tourism Statistics, Ottawa, Canadian Government Office of Tourism, p. 7.
- (44) John Powell (Chairman), A Report by the Sector Task Force on the Canadian Tourism Industry, Ottawa, Industry Trade and Commerce, 12 July 1978, p.1.
- (45) Ontario Ministry of Treasury and Economics, The Effect of Rising Energy Prices on Tourist Operators in Rural Ontario, Economic Development Branch, January 1980, pp. 2 and 3.
- (46) F. Rajotte, pp. 43-52.
- (47) see G.W.S. Robinson, "The Recreation Geography of South Asia", Ekistics, No. 208, March 1973, pp. 139-144, or W. Ritter, "Recreation and Tourism in Islamic Countries", Ekistics, No. 236, July 1975, pp. 56-59.
- (48) S. Schulmeister p. 93.
- (49) M. Clawson and J.K. Knetsch, pp. 61-63.
- (50) R.W. Butler, "Problems in the Prediction of Tourist Development", Studies in the Geography of Tourism, Salzburg, I.G.U. Workshop, May 1973, pp. 46-63.
- (51) Beverly D. Shipka, Tourism and Energy, paper presented to New York Chapter, The Travel Research Association, 26 February, 1974, p. 4.
- (52) Ibid., pp. 5-6.
- (53) United States Travel Service, The Impact of the 1979 Gasoline Shortage on the U.S. Travel Industry, Washington, May 1980, p. 5.
- (54) Ibid.,
- (55) "Facilities: the fever spreads, construction pace rapid", Financial Post, 24 August, 1974, pp. 22-24.
- (56) Laventhol and Horwath, Trend of Business in Hotels, Toronto, July 1979, p. 1.
- (57) D. Logan, "Resort operators bemoan drop in U.S. visitors", Globe and Mail, 16 July, 1979, pp. 1 and 2.

- (58) J. Iton, The Economic Impact of the 76 Olympics Games, Office of Industrial Research, Montreal, McGill U., 1977, pp. 76 and 77.
- (59) The legislation was finally recended in December, 1980.
- (60) John Powell (Chairman), A Report by the Sector Task Force on the Canadian Tourism Industry, pp. i-36.
- (61) Ibid., pp. 7-16.
- (62) Laventhol and Horwath, Trends 1976, Toronto, p.1.
- (63) A. Silversides, "Delta seen as Canada's fastest expanding hotel chain", Globe and Mail, 26 January, 1981, p. B12.
- (64) Peter Brouwer, "The Delta Story", Canadian Hotel and Restaurant, November 1980, p. 27.
- (65) L. McDougall, The Study of Provincial Park Trends Over the Past Five Years and Implications of The Energy Crisis, Ryerson Polytechnical Institute, Fall 1980, p. 17; (unpublished paper).
- (66) G. Gauthier, Analysis and Research, Socio-Economic Research Division, Parks Canada, personal communication, 5 January, 1981.
- (67) Ontario Ministry of Natural Resources, A Comparative Analysis of Various Campgrounds Outside Ontario with An Emphasis on Camping in Ontario, Toronto, 1980, p. 47.

CHAPTER 4

THE TOURISM INDUSTRY AND ENERGY CONSERVATION

It should be clear from the foregoing discussion that the era of cheap and abundant energy resources is drawing to a rapid end. In the immediate future, we are faced with a prolonged period of relatively tight supply and rising prices for energy. This new decade calls for a re-orientation of public attitudes and habits in respect to the consumption and conservation of petroleum. Various organizations such as the Science Council of Canada, Ontario Economic Council, Economic Council of Canada and the Tourism Industry Association of Canada have stressed the importance of conservation as a strategy for the future. Conservation, in terms of a conserver society, may become a way of life out of necessity in the '80s as petroleum reserves diminish.

Two issues are associated with the practice of conservation that, in the past, have negated its value in the public's mind as an option for the future. First, on a broad scale, the question is related to the 'growth' vs 'no growth' philosophies of economic development. Because energy consumption and economic growth have been the rule in the past, the idea that the two phenomena must not necessarily be directly related is an entirely new paradigm that takes time to get used to. Recent studies, however, argue that saving is not only the most economic and least inflationary but possibly the most productive and innovative of energy strategies. In today's economies, it is cheaper to save a BTU than in providing an additional new one. Businesses dealing with saving energy will become one of the growth industries of a conserver society.

The second issue relates to one of the basic tenets of North American society, particularly in the U.S.; the idea that the energy crisis, like all problems, can be solved by the big, expensive, quick, technological fix. Developments in the nuclear, hydro and solar industries have been expected to save the western world from continued reliance on decreasing petroleum reserves. At the heart of the hope for the technological fix option is that it seems to offer a continuation of our present standard of living, behaviour and attitudes. Unfortunately, no energy technological breakthrough seems imminent and the costs, both economic and environmental, associated with these strategies severely limit their overall utility.

Conservation, at all levels, in the short and long-run provides the most viable policy option for neutralizing the adverse effects of increased energy costs and restricted supply. It is non-polluting, low cost, consists of proven technology and can be achieved relatively quickly. In addition, conservation saves money - probably its biggest advantage.

Due to the importance of conservation in the immediate future, this chapter will review the role that conservation strategies may play in each component of the tourism industry in Canada. Conservation practices adopted by consumers in general may have a significant impact on future tourism demand. In addition, conservation measures employed by the linkage and supply components of the industry will be examined. For conservation to be successful, altered patterns of energy consumption

must be adopted in each of the demand, linkage and supply aspects of the industry.

4.1 Conservation and Demand

This section deals with the conservation strategies on consumer behaviour and attitudes and their impact on the travel/tourism industry. Two aspects must be understood. The first deals with the direct impact of conservation, manifest in decreased recreational driving, and the effect it may have on the industry. The second aspect concerns the general conservation strategies consumers may adopt to minimize energy costs and maximize disposable income - the tourist industry's lifeblood. The second aspect will be dealt with first.

A number of studies have examined the general public's attempts at energy conservation. Studies in the United States have been able to measure reactions to actual crisis incidents while investigations in this country have attempted to ascertain the Canadian response to the changing global situation. Studies in both countries have produced remarkably similar results.

Generally, the surveys show that in most cases, the energy crisis is considered to be a serious problem by consumers, but it ranks below concerns such as taxation, unemployment, inflation and pollution. During the 1973/74 crisis in the United States, a majority of the public surveyed considered the energy shortage to be an important problem but

only about 25% felt that it was the most important problem facing the country at that time.¹ In Canada, as late as 1978, concerns about energy ranked fourth behind inflation, taxation and pollution.² The relatively low ranking of energy matters, in both Canada and the U.S., is related to consumer's perceptions that somehow the crisis has been 'staged' by the oil companies, primarily, and public officials, secondarily. This misconception has important implications in terms of the public's willingness to adopt conservation methods which include degrees of self-sacrifice.

Recently, a number of studies have been published that provide a considerable degree of insight into many aspects of the Canadian public's perceptions of and attitudes towards energy issues in the late '70s. The work shows that public perceptions of resource problems appear to follow a fluctuating cycle of interest and attention that is correlated with the severity of the issue and its degree of dramatization by the media.³ Between 1975 and 1979, Canadian's concern over an energy shortage declined and no measurable differences in the level of concern based on demographic characteristics were found.⁴ The fact that no demographic factors were identified as significant indicates that general popular support, albeit rather limited, does exist for energy conservation. What energy saving measures that were adopted were within a very limited range and as painless as possible. With respect to four conservation behaviours, Feller and MacDougall reported that the greatest change was for "turning off the lights more often", which increased by 20%.⁵ The studies found that no respondent partook in all conservation practices available and most felt that their

options were extremely limited. Finally, the difference between attitudes and actual behaviour, as measured by the number or range of conservation measures adopted, became evident.⁶ This discrepancy may be due to methodological problems or the complexity of the issue but it emphasizes the contradictions that are often encountered in linking attitudes and actual behaviour. A fact that has significant policy implications.

In terms of automobile utilization and conservation practices, the issue that directly concerns the tourist industry, the available data indicate that consumers were most reluctant to alter this aspect of their lifestyle. Keller and MacDougall found that "driving less" recorded the smallest change in Canada between 1975-78.⁷ This might have been due to the perceived or actual difficulty in reducing this activity. Residential location plays an important role in the ability of consumers to conserve energy through curtailed driving. American studies have shown that urban dwellers easily adjusted to lessened gasoline consumption but had difficulty reducing heating requirements. In contrast, rural respondents decreased space heating demands but were unable to lessen overall gasoline needs.⁸ The availability of public transit explains these findings. Not surprisingly, automobile ownership, size of engine and utilization, as measured by gasoline consumption, were shown to be related to the price of fuel. Based on the evidence of a study of public energy attitudes and behaviour in Barrie, Ontario and Red Deer, Alberta, it would appear that Barrie households did tend to use less gasoline on average than did Red Deer households.⁹ The reported medium price paid for gasoline was 7% higher in the Barrie sample than in the Red Deer sample.

An examination of consumer conservation behaviour in Canada over the past few years shows it will continue to have had a mixed impact on the tourism industry. In the short-run, the industry can be assured that people will continue to own and drive automobiles much as they have in the past. The size of the car may be smaller, there may be a choice of fuels available and trip strategies will become important but automobiles will continue to be the main mode. In an urban society, gasoline conservation can be obtained by altering journey-to-work patterns - such as increasing the use of public transit or car pools and saving disposable income and gasoline enabling recreational driving to be maintained.

In the long-run, however, the tourism industry may be adversely affected as increases in consumer's disposable income decreases due to the inflation associated with declining petroleum reserves. It is widely accepted that sufficient disposable income is necessary to engage in tourism activity and that the post-war boom in tourism was made possible by sizeable advances in general wage levels. The restricted growth in incomes, productivity and output in the western world during the latter half of the '70s bodes ill for the industry. Moreover, there is no indication that income is being distributed in a more equitable way, thus enabling more people to become potential tourists.¹⁰ As the energy situation becomes critical, the psychological need for travel and tourism is bound to increase but the mobility may no longer be available. Conservation of energy seems to be the only option consumers and industries have to counter continually increasing energy costs.

4.2 Conservation and Linkages

Since transportation accounts for approximately one half of total petroleum consumption, energy conservation practices are an immediate concern to all transport companies. The transportation of people and freight evolved during an era of cheap and abundant petroleum supplies, but today, the industries must adapt to the energy economics of the 1980s. A strategy that means redesigning the transport equipment and networks to maximize energy efficiency and decrease costs.

Due to its dominance in the transport sector, the automobile is the key to transportation energy conservation. Investment in public transit helps, but only minimally. The main target must be the private car itself where there is enormous leverage to do something about energy efficiency in passenger transportation. Small percentage movements in the energy efficiency of cars and how they are used have big payoffs, whereas big percentage improvements in public transportation patronage have only small payoffs.¹¹

In terms of energy conservation strategies and the automobile, three areas warrant attention. The first deals with improving load factors - particularly, the journey-to-work ratio. The most recent data for Canada shows that slightly over one half of all vehicles on a journey-to/from-work carry only the driver.¹² It is realized that there is as strong a resistance to car pooling as there is resistance to public transit. The point is that for equal resistance, there is a lot

more potential in automobile load factors.¹³ An objective that can be achieved by restricting traffic lanes and downtown parking lots to car pools only.

The second focus must be to increase the energy efficiency of the automobile itself. This objective may prove difficult as the car of the future must meet the conflicting demands of less energy consumption, lower exhaust emissions, lower noise levels and greater occupant safety. Technological improvements already underway include downsizing programs to reduce the average auto's size, a greater use of light weight materials and changes in the vehicle's layout. Increased use of electronic controls for the ignition and fuel systems, improvements to the efficiency of the transmission and drive trains will bring additional fuel economy.¹⁴ More radical technological innovations includes increased use of gas turbines or stirling engines.¹⁵

The third area for potential conservation concerns the developments of alternatives to petroleum as the sole automobile fuel. Because of the financial stake in the existing petroleum infra-structure and distribution network, viable alternatives to gasoline will take time to develop and become commercially available. Alternative sources of energy fall into four categories: i) liquid fuels derived from either coal, tar sands or shale oil, (ii) alcohol fuels or a combination of alcohol and gasoline (gasohol), (iii) electricity, and (iv) longer-term alternatives such hydrogen, fuel cells and mixed fuels.¹⁶ Compared to petroleum all of these alternatives are more costly and will remain so

until the rising price of petroleum meets the declining costs of the alternatives. The eventual outcome will be the development of a combination of alternative sources to relieve the demand on petroleum supplies.

Transport Canada estimates that between 1975 and the year 2000, developments in engine technology could reduce fuel consumption by 24%, improvements in the area of transmissions are expected to save 7% while vehicle design changes could decrease fuel demand by 18%. Therefore, over the next twenty five years, automobile fuel consumption could, in theory, be reduced by half.¹⁷ When savings of this magnitude are projected to national fleet dimensions, the potential savings in petroleum become impressive. Hopefully the automobile industry will be able to raise the money for the massive re-investment required by the energy economies of the '80s.

Potential measures to reduce fuel consumption in the airline industry generally fall into two discrete categories. The first includes strategies that are within the airlines options while the second group is comprised of events that are out of the industry's effective control.

Measures within the first category range almost from the ridiculous to the sublime, but all focus on reducing the weight of the plane. Eastern Airlines is going back to their old Slogan the 'Great Silver Fleet' since it decided to strip the paint off their entire fleet. By removing up to 447 pounds on a L-1011 and polishing the bare metal, fuel consumption should be reduced by 0.5%. Reduced cruising speed is an

option for the airlines - a reduction from 544 to 533 m.p.h., adds only four minutes to a trip from Edmonton to Toronto but saves 164 gallons of fuel. Close to the ridiculous is the replacing of beer bottles with cans and the shaving of the carpets to reduce weight and fuel consumption. More serious conservation strategies, in terms of air safety, include the elimination of life rafts on flights over water, the carrying of less spare parts and the practice of flying with only enough fuel to reach the planned destination but without enough to reach an alternative site.

Areas of potential energy conservation, external to the airlines, are generally related to the operation of the industry in the bureaucratic and technological sense. Airlines claim they waste fuel and time by having to fly non-direct routes due to air-space restrictions placed on them by particular governments. Much of the industry's fuel saving problems are linked to the airport traffic control system. Increased use of computers should facilitate the development of flight management systems which would improve the accuracy of climb and descent procedures and decrease stacking. Improvements in air traffic control systems offer the largest potential for cutting fuel consumption and reducing fuel costs, but they require increased governmental spending at a time when less federal money is available.

The increase in petroleum prices in '73 triggered a change in design strategies for the airline industry. The priority to increase speed was dropped for greater fuel economy. New plane designs and technological developments, especially in the area of the wings, have resulted in a greater aerodynamic efficiency without compromising structural strength.¹⁸ Whether the airline industry will be able to raise the capital for the extensive investment required in fuel efficient equipment is the question for the 1980's.

4.3 Conservation and Supply

Energy conservation and the supply side of the tourism industry, is at present the least developed and least effective in the three components. There are a number of reasons for this. Petroleum plays a relatively minor role in total energy consumed. Therefore the industry has a greater choice of alternative sources of energy available, unlike the automobile or airline industries. Due to the nature of the tourism industry, conservation efforts are usually one shot, uncoordinated, affairs, such as low-cost weather-proofing, that lack an overall objective. The lack of data within the industry also deters energy conservation strategies. In terms of plant operation, there is little public data on how energy can be saved and little incentive to do so.¹⁹

Energy, Mines and Resources (EMR) estimates that the hotel/motel establishments of Canada consume the equivalent of 3.8 million barrels of fuel - enough to heat 200,000 homes for a year.²⁰ Energy consumption on such a large scale provides a ready opportunity for energy conservation.

For energy conservation to be totally effective, the full cooperation of all building users must be obtained. Within the business, each employee must understand the importance of conserving energy, be shown how to conserve and the responsibility of ensuring that conservation practices are continued must be delegated. The tourism industry further requires the active participation of the resident guests. This cooperation is much easier to obtain if conservation measures are stressed in all levels of society and business.

Energy conservation measures must be tailored to meet the needs of each individual situation. It may be feasible for a large hotel to undertake a sophisticated, engineered energy conservation program requiring significant investment. Such an approach would be entirely inappropriate for smaller hotels or motels.

Efforts by Canadian Pacific Hotels to conserve energy illustrates the measures available to a large corporation that recognizes the saving available.²¹ Within the head office organization, energy conservation is the responsibility of a senior level manager who is able to provide a

central thrust to their programs. Information is distributed through a monthly newsletter to all hotels, flight kitchens and restaurants, keeping hotel management engineering staff up-to-date on the latest technological improvements to do with energy conservation. Computer technology has been employed to monitor hotel room energy consumption in BTU's, degree days and occupancy rates. Although energy considerations have yet to affect hotel location or site development plans, they have led to a rethinking of construction practices. The next project in this chain "...will probably get some proposals on using solar energy for heating of the domestic hot water."²²

An examination of conservation and the hotel/motel industry by Energy, Mines and Resources concluded that energy savings of up to 20% could be obtained through a concerned management effort, requiring very little capital investment. More expensive projects, including improved insulation, computer controlled ventilation system, and heat recovery or solar assisted energy systems, may reduce energy demand a further 20%. Therefore, by ENR's estimates, the accommodation industry could potentially save up to 40% of present energy consumed. An amount equivalent to the savings of about 1 1/2 million barrels of fuel oil a year, worth \$32 million at today's prices.²³

These estimates of potential energy savings in the accommodation industry are only that, estimates. To some in the industry, they are actually overestimates. Representatives of the industry point out that other studies show inexpensive conservation programs only reducing total energy demand by 5-7%, less than half of the EMR figure.²⁴

Whatever the exact figures, potential energy savings are as readily available in the supply side of the tourism industry, as they are in the other two components. It is predicted that significant energy savings can be obtained at the demand stage without substantially reducing present standard of living levels. The automobile and airline industries can benefit from increased energy efficiency, if they can raise the investment to undertake the necessary design changes in equipment. The supply facilities of the industry have only begun to take energy conservation seriously and dramatic savings in reduced energy demand should be forthcoming. These measures, practiced at all levels, may alter the character of tourism in the 1980's, but the industry should prevail.

4.4 Rationing and Allocation

The petroleum allocation and rationing plans are Canada's requirements to belong to the International Energy Agency (I.E.A.). The I.E.A. was established after 1973 for the purpose of mutual protection against interruptions of oil supplies. This mutual protection takes the form of cushioning the impact of the oil shortages through a complex arrangement of stock pile and import sharing. In addition, each nation

made a commitment to reduce their oil consumption generally and specifically in times of an emergency.

An Energy Supplies Allocation Board (E.S.A.B.) has been established with the power to implement the plan if "...a national emergency exists by reason of actual or anticipated shortages of petroleum."²⁵ The mandatory allocation program designates the regions in which the program is to operate, specifies the petroleum products, sets out the priorities of use of the controlled product and provides for the systematic allocation of supplies.²⁶

A shortfall of 20% has been suggested as the trigger point which would activate the rationing aspect of the program. Rationing requires that the purchase and sale at any and all levels be made in such quantities as may be authorized by the E.S.A.B. upon documentary evidence issued by the Board.²⁷ The Mandatory Allocation Program (commonly known as rationing) subdivides petroleum consumers into a number of categories by priorities of use.²⁸ The three categories are as follows:

- i) Category A, uses relating to health, welfare and security,
- ii) Category B, uses relating to economic stability, and
- iii) Category C, uses relating to the maintenance of the standard of living of Canadians.

Reviewing the preceding priority system, it may not be surprising that many of the industries defined as tourism related have the lowest priority, 'C'. Facilities such as motels, hotels, marinas, recreation, service stations and taxis have all a 'C' rating. Space heating for residences, apartments, schools, hotels and motels are given a 'B' priority as are car rentals and commercial air flights. Finally, public transportation including road, rail, water and flights to remote areas are assigned the highest designation, 'A'.

The proposed rankings of tourism establishments during periods of petroleum rationing is of great concern to those in the industry. The industry is especially indignant at its low-ranking since it has figures to show that in terms of energy consumption per numbers employed, it makes a significant contribution to Canada's labour force. The industry also feels that, in terms of the actual amount of energy tourism consumes, it is being penalized far too much. There is no reason to suspect that tourists use any more or less energy than the same family going about its daily business at home, work or school. Even in automobile transportation, the largest user of energy, pure tourist trips consume very little energy. One source calculates petroleum fuel consumed from tourism miles to be only 12%.²⁹ Moreover, vacation travel by automobile more fully utilizes car capacity resulting in more efficient consumption of fuel.³⁰ Apart from these statistical arguments, during periods of serious supply dislocations, sacrifices will have to be made and the tourism industry, like other sectors of the economy, will have to do its part.

Finally, if rationing is ever required, the adverse effects on the tourism industry will originate from the impact of gasoline allocations programs rather than the priority rating of particular establishments. The United States response to a 10% gas shortage in 1979 was an immediate 19% reduction in informal short-duration recreational travel, particularly to destinations relatively distant from metropolitan areas.³¹ The United States Travel Data Center estimates that real sales in the tourist industry were down 9% in both the second and third quarters of 1979, while annual real sales fell by 7%.³² Even with concerted efforts in total energy conservation, it is predicted that for an oil shortage of 20%, nearly 60% of this shortfall would have to be covered by reduced travel. Decreased auto travel, especially long-distance recreational trips, will have serious consequences in terms of employment and sales for the tourism industry, during times of mandatory rationing.

In conclusion, conservation provides the most viable strategy of adjusting to increased energy costs and restricted supply. Studies have shown that a number of conservation measures are available in all aspects of the industry and that they can produce significant savings with very little personal inconvenience or self-sacrifice. If the energy situation deteriorates to the point where allocation and rationing programs are required, the tourism industry would be seriously hurt by the impact of gasoline rationing which would severely limit recreational driving.

FOOTNOTES FOR CHAPTER 4

The Tourism Industry and Energy Conservation

4.1 Conservation and Demand

- (1) James R. Murray et al., "Evolution of Public Response to the Energy Crisis", Science, Vol. 184, 19 April 1974, p. 257.
- (2) A.H. Jacobs and L.T. Foster, "Socio-Economic Correlates of Energy Attitudes and Behaviour in Metropolitan Toronto", in Energy Attitudes and Policies, E.L. Jackson and L.T. Foster (ed.), Victoria, Cornett Papers #2, 1980, p. 85.
- (3) B. Sadler, "Social Attitudes and Energy Policy: Dimensions and Implications", in Energy Attitudes and Policies, p. 178.
- (4) G. Keller and G.H.G. MacDougall, "Energy Attitudes and Behaviour of Canadians (1975-79)", in Energy Attitudes and Policies, p. 29.
- (5) Ibid., p. 24.
- (6) B. Sadler, p. 182.
- (7) G. Keller and G.H.G. MacDougall, p. 24.
- (8) Richard T. Curtin, "Consumer Adaptation to Energy Shortages", Journal of Energy and Development, Vol. 11, No. 1, Autumn, 1976, p. 54.
- (9) R.V. Brady, "Some Public Energy Attitudes and Behaviour Differences Between Barrie, Ontario, and Red Deer, Alberta", in Energy Attitudes and Public Policies, p. 111.
- (10) A. Zalatan and R. Burdge, "The Future of U.S. International Tourism: Some Neglected Facts", Journal of Travel Research, Spring 1980, p. 17.

4.2 Conservation and Linkages

- (11) A.A. Bach, "Transportation and Energy", Forum, Roads and Transportation Association of Canada, Vol. 1, No. 3, 1978, p. 55.

- (12) Statistics Canada, Travel to Work, Ottawa, Cat. No. 87-001, Vol. 3, No. 7, p. 2.
- (13) A.A. Bach, p. 56.
- (14) Richard P. Brennan, "The Automobile's Endangered Future", The Futurist, October 1979, p. 322.
- (15) Steve Olson, "Prospects for the Automobile: Sputtering Toward the 21st C", The Futurist, February 1980, p. 34.
- (16) Richard P. Brennan, p. 319.
- (17) Transport Canada, The Future of the Automobile in Canada, Ottawa, Strategic Planning Group, April 1979, p. 12.
- (18) M.E. Long, "They're Redesigning the Airplane", National Geographic, January 1981, p. 99.

4.3 Conservation and Supply

- (19) J.D. Barry, Tourism and Energy, Overview and Recommendations, Ottawa, Tourism Industry Association of Canada, February 1980, p. 1.
- (20) Energy, Mines and Resources, Energy Conservation in Hotels and Motels: Review of Canadian and U.S. Studies, Surveys, Programs and Publications, Ottawa, Building Series #2, 1979, p. 3.
- (21) Personal communication, 2 December, 1980.
- (22) Ibid.
- (23) Energy, Mines and Resources, Energy Conservation in Hotels and Motels: Review of Canadian and U.S. Studies, Surveys, Programs and Publications, p. 7.
- (24) J.D. Barry, p. 1.

4.4 Rationing and Allocation

- (25) "Energy Supplies Emergency Act, 1979", Canada Gazette, Part III, Vol. 4, No. 7, p. 6.
- (26) Ibid.
- (27) "Mandatory Allocation Program", Canada Gazette, Part I, November 1980, p. 2.
- (28) Ibid.
- (29) Earl R. Kruschke, Tourism and Energy Consumption, paper presented to the American Anthropological Association, Mexico City, November 1974, p. 96.

- (30) Beverly D. Skipka, Tourism and Energy, paper presented to New York Chapter of the Travel Research Association, 26 February, 1974, p. 3.
- (31) Transport Canada, The Allocation of Transportation Fuel and the Transportation of Domestic Crude Oil in the Event of Oil Import Reductions, Ottawa, Strategic Planning Group, December 1980, p. 76.
- (32) The 1979 Gasoline Shortage: Lessons for the Travel Industry, The Travel Industry Association of America, Washington, 1980, p.4.

CHAPTER 5

SUMMARY AND CONCLUSIONS

Tourism in the modern sense is a relatively new phenomenon and industry. Following an unprecedented rise during the post World War II era, growth in travel and tourism is showing signs of a slowdown. This trend is the result of worsening economic conditions in the industrialized countries, high worldwide inflation, increasing unemployment and continually rising oil prices - perhaps the root cause of all other problems.

This paper has attempted to identify the energy issues as they related to tourism in Canada during the last decade. The investigation has shown that the energy crisis phenomenon itself is an extremely complex and involved subject. Two distinct stages of the crisis were outlined, each having a significantly different impact on the tourism industry. The two periods of actual petroleum supply interruptions and real price increases had an overall positive effect on the industry. The fact that these crisis incidents occurred externally to Canada primarily accounts for this outcome. The second stage, 1973-1978, has been described in this paper as an adjustment period - a time when countries and individuals attempted to adapt to increased energy costs. Due to the interconnections between Canada's economy and the global market place, this country was directly effected by the altered energy economics of the period. Shifts in Canada's international competitive position, coupled with important developments in domestic demographic

and employment characteristics and structural aspects within the industry produced a serious dislocation between the demand and supply factors of the Canadian tourism product. By 1978, the industry had undergone a thorough review and programs were in place to deal with shortcomings that had been identified. These efforts, assisted by the second energy crisis incident of 1979, have improved the tourism industry's recent economic performance.

The scope of this research required that a comprehensive, coordinated and somewhat novel approach be employed in the analysis. The energy crisis/tourism industry matrix, adapted from a research framework suggested by Lisle J. Mitchell, proved to be a valuable tool in identifying the energy crisis impacts on the industry. The tourism industry comprised the horizontal axis and was divided into three components of economic geography; demand, linkage and supply. This subdivision allowed the tourism/travel process - a subject that is behavioural, geographical and economical in nature - to be examined in a logical, coherent fashion. The analysis of this paper demonstrated that a geographical perspective is insightful and legitimate as it illustrated the importance of place and time in the tourism phenomenon.

The vertical axis contained the two periods of the energy crisis, substituting for the concepts of purpose, structure and distribution in Mitchell's original matrix. Although these three concepts were replaced, their respective research focuses - ideological, organizational and regional - were kept in mind and utilized in the analysis of this

paper. The effects of the energy crisis were felt immediately by the structural and organizational character of the tourism industry. The ideological and regional aspects were indirectly impacted as increased energy costs altered the economics of the world. The matrix was least useful in examining the supply side of the industry - a fact that has more to do with the nature of the industry than the matrix itself.

The objectives of this paper were twofold. The first was to examine, in detail, the energy crisis phenomenon. The second objective was to document the effects of the petroleum crisis on tourism in Canada. Before this could be done, however, it was imperative that the issue of energy depletion be fully understood. To accomplish this first objective, it was necessary to review four aspects of the energy situation.

First, the historical perspective demonstrated that, in fact, the energy crisis actually consisted of two distinct parts; (i) the periods of supply dislocations of which there have been two, and (ii) the years when the global economy attempted to adjust to higher energy prices. It was shown in this paper that each of the periods had significantly different effects on tourism in Canada. The historical overview also identified the volatile nature of the Persian Gulf Area and that the two petroleum supply interruptions were the result of deliberate political decisions. If present trends continue, the nations of the world, including Canada, will rely more and more on this turbulent region for the petroleum necessary to fuel future economic growth.

The second aspect examined was the present petroleum demand/supply situation in Canada and the world. During the 1970s, Canada evolved from being self-sufficient in petroleum to a net importer of almost one half of total consumption. At the same time, in spite of new production from areas such as Alaska and the North Sea, the industrialized nations continued to be dependent on OPEC for significant portions of their total oil demand. The short-term scenarios to 1985 forecast a continuation of these trends resulting in tight petroleum supply through the decade. World petroleum prices are expected to increase by 1-2% in real terms over the next ten years. The future of Canadian petroleum prices, currently the lowest among the industrialized countries, is much harder to predict. The policy of maintaining domestic prices well below world levels is proving to be an expensive option, particularly as oil imports increase.

The third facet of the energy crisis analyzed in this paper was the relationships between energy costs and national economies. The traditional differences in the cost of petroleum resources has led to distinct patterns of consumption and efficiency among the nations of the industrialized world. It was necessary to establish the direct and indirect links between rising energy costs and inflation, unemployment, aggregate demand and exchange rate fluctuations. The magnitude of the effects of energy price changes on a particular country are determined by a number of domestic and external variables. The domestic variables include the present patterns of energy demand, structure of the economy, social characteristics, resource potential and political policies adopted by the nation in question. External factors of importance are

the shifts in exchange rates, the structure and volume of international trade and the performance of an individual country in the international economy. An irony of the last decade was the relative success of the economies of Switzerland, West Germany and Japan - countries that are nearly totally dependent on imported petroleum - compared to the two nations of North America that enjoy abundant oil resources.

The fourth characteristic examined the effects of increased gasoline prices on driving habits, an issue that is at the same time one of the most important and least understood consequences of the energy crisis. The evidence of the last decade shows that oil - importing governments, through gasoline taxation decisions, purposely let the real price of gasoline decline from 1975 to 1978. This fact has in many ways confused the issue of the elasticity of demand for gasoline as prices increased in nominal terms only. Theoretical studies have demonstrated that under increasing gasoline price conditions, consumers will adjust by any number of means. The amount of adjustment depends by and large on the socio-economic characteristics of the consumers involved. One underlying lesson that permeates these theoretical studies is the heterogeneity of the results. Increased gasoline costs impact on individuals, regions and societies in varying magnitudes depending on the economics, values, politics and demographics of those studied.

The second objective of this paper was to examine the impact of the energy crisis on the tourism industry of Canada and two hypotheses were suggested. First, it was hypothesized that the two stages of the crisis would have different sets of impacts on the industry. This turned out

to be the case but the effects were not as expected in that the periods of actual supply dislocations internationally, and particularly in the United States, had an overall positive impact on the tourism industry in Canada. Shifts in international travel patterns translated into a growth in domestic travel demand in this country. Although, only part of the reduced international travel demand by Canadians was transformed into domestic recreational travel and tourism, the increased resident market more than compensated for the declining foreign volumes from the United States. The sporadic shortages of gasoline forced some consumers, those who could afford it, to switch to mass mode travel, especially for long-distance trips in the U.S. The supply side of Canadian tourism recorded positive movements in the indices that monitor the industry. Hotels experienced increased occupancy rates while provincial parks' statistics showed a rise in camper nights and visits. Both types of accommodation recorded decreased American tourism but increased total demand.

The relative position of Canada's international travel account is used by some as a barometer of the state of health of this country's tourism industry. In both 1974 and 1979, the account registered a drop in the overall deficit due to shifts in the travel patterns between Canada and the rest of the world. The decrease in the number of Canadians travelling to the U.S. was primarily responsible for the improvement in Canada's travel account. In terms of the magnitude, the significantly larger deficit of 1979, compared to 1974, was a result of the international travel patterns that evolved during the 'adjustment period'.

It was recognized that the two periods of petroleum supply disruptions only proved to be beneficial for the Canadian tourism industry because they occurred in the United States and not in this country. The evidence in the United States demonstrates without a doubt that the industry was badly hurt by both crises. Businesses dependent upon the auto trade were adversely effected in terms of employment and retail sales by the restrictions placed on gasoline supplies. Within the industry, the data shows that newer and larger facilities, possibly financed at higher interest rates, suffered more than older establishments of the total tourist plant. Facilities and attractions peripheral to the main population centers experienced a drop in demand while those adjacent to urban areas had to cope with record numbers. In both 1974 and 1979, actual gasoline shortages lasted only for a few months, however, their impacts, in terms of altered driving behaviours, lasted throughout the year. The conclusion to be drawn is that any long-term interruption in petroleum availability - of six months to a year - would have serious consequences for the tourism industry.

The adjustment period of the energy crisis, 1975-78, was a very difficult time for tourism in Canada. During the period between the two crisis incidents, gasoline prices in North America actually declined in real terms. Therefore, it is not surprising that the travel demand patterns were not dramatically altered by petroleum conditions. The increased energy costs did impact on the demand patterns in much more subtle ways through the economies of Canada and the world. Fluctuations in Canada's economic environment, in terms of disposable incomes, inflation, unemployment and exchange rates, altered Canada's relative

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position in the global tourism market place. The increases in wages and inflation rates negated Canada's international tourism competitive position by pushing up this country's Travel Price Index at a faster rate than the one in the U.S. At the same time, these same conditions encouraged domestic residents to travel outside this country. The economic trends of the period coupled with social, demographical and structural developments resulted in significant shifts occurring in Canadian's demand for domestic or international destinations and produced dramatic increases in the travel deficit. It took a concentrated effort by those in the industry to change the public's perceptions and attitudes here and abroad about the Canadian tourism industry in terms of value for money and hospitality. By 1978, these efforts were reinforced by changing economic conditions, reduced rates of inflation and a devaluation of the currency that re-established Canada's attractiveness in the international tourism market place.

Among the different segments of the tourism industry, the energy crisis has had its most significant impacts on the linkage agencies - the airlines and automobile manufacturers. The decision to maintain petroleum costs below world levels by both national governments of North America was to have a disastrous effect on the auto industry in the long-run. The artificially low price of gasoline in North America meant that the industry was able to postpone expensive wholesale technological improvements to increase fleet energy efficiency. By the end of the decade, increased gasoline prices, particularly in the United States, encouraged consumers to regard fuel efficiency as a major priority when purchasing a new vehicle. As a result of changing consumer preferences

and the second post-energy crisis recession, sales of imports increased dramatically in 1980 while North American manufacturers had their worst year ever. Net losses for the North American industry in 1980 were estimated to be just over \$4 billion.

The airline companies of Canada and the United States have had to deal with higher fuel costs from the first OPEC price increases of late 1973. Since international carriers must buy part of their jet fuel requirements at world prices, the industry has gone to great lengths to make their equipment and operations as efficient as possible. Even with extensive energy saving strategies, the fuel costs for all airlines have risen dramatically. Occurring at the same time in North America has been the trend toward increased flexibility and reduced governmental regulations in the industry. The distinction between scheduled and charter carriers is now almost non-existent. Charter airlines, particularly vulnerable since they must buy jet fuel at world prices, are already operating at higher load factors and now must compete with discount seat sales by the scheduled carriers. In 1980, the airlines and automobile industries face extensive capital requirements necessary for the massive re-investment required to purchase and build new, fuel-efficient equipment.

In the short-run, conservation of energy - petroleum in particular - appears to offer the best strategy to adopt for an uncertain future. It is generally recognized that there is untapped potential for energy savings in every facet of the tourism industry. Conservation can only succeed if it is taken seriously and pursued conscientiously.

throughout society. Presently negating any serious efforts towards conservation in Canada is the relatively low cost of petroleum in this country. Studies show that most of the energy saving measures adopted by consumers involve very little personal inconvenience or self-sacrifice. Reviewing automobile utilization and conservation practices, the issue that directly concerns the tourist industry, the available data indicates that consumers were most reluctant to alter this part of their lifestyle. The fact that conservation has not been identified with particular socio-economic characteristics suggests that future support could potentially come from the entire population. If the energy situation deteriorates to the point where allocation and rationing programs are required, the tourism industry would be seriously hurt by the impact of gasoline rationing which could severely limit recreational driving. In addition, the negative economic consequences of allocation and rationing would greatly alter consumer behaviour to the overall detriment of tourism.

The tourism industry must do all it can to be informed about the changing energy scene, be aware and practise conservation measures at all levels and take steps now to plan intelligently for inevitable scenarios. The industry, like other aspects of society, depends on government to take the leadership necessary to adjust to the changing global energy environment. A number of reputable organizations, such as the Tourism Industry Assoc. of Canada, the Economic Council of Canada and the Ontario Economic Council, suggest that the Federal Government must take the first step towards a realistic energy policy by increasing the price of domestic petroleum.

It is evident from this research that the second suggested hypothesis proved correct as energy conditions were the pervasive element in tourism evolution during the last decade. Increasing petroleum costs in real terms, and the possibility of sporadic supply disruptions has impacted on every facet of the travel business. The two periods of petroleum dislocations produced direct and dramatic changes in international travel patterns and the domestic industry. While not underestimating the importance of these abrupt incidents, over the long-run, the indirect effects of increased costs translated through the economy are more likely to be critical factors in tourism development. Examples include the continual whittling away of disposable income growth by inflation, the bankruptcy of a major automobile company or a significant re-valuation in exchange rates.

This paper has attempted to identify the energy issues as they have related to Canadian tourism in the 1970s. Since both phenomena continue to evolve, further investigations in the area are necessary and prudent. Research might focus on the gasoline price/elasticity of demand relationship, primarily in a Canadian context, the effects of increased domestic energy prices on this country's relative position in the international tourism market place or the potential impact of the 'worst-case' scenarios to help establish potential policy strategies. Only by continued and careful analysis can tourism be prepared for the potential consequences of future domestic and international energy developments.

To some, the depletion of petroleum is only the beginning of a series of shortages forecast to occur in a number of natural resources. Others see the crisis as a forced break with old traditions and an opportunity to alter the very essence and structure of our global society. Whatever the outcome, the travel/tourism industry, in one form or another, will endure. The relative success of tourism, however, greatly depends on the decisions in the on going energy debates. The industry can only maintain a strong presence in the future by careful analysis of the current energy/tourism issues.

BIBLIOGRAPHY

1. Amuzegar, J., "OPEC and the Dollar Dilemma", Foreign Affairs, Vol. 56, No. 4, July 1978, pp. 740-750.
2. Anderson, Ronald, "Search for new energy should be on crisis basis", Globe and Mail, 8 May, 1980, p. B2.
3. _____, "Self sufficiency goal going down the drain", Globe and Mail, 9 September, 1980, p. B2.
4. _____, "Consumers must fund energy development", Globe and Mail, 1 October, 1980, p. B2.
5. _____, "Explosion looming in Western Canada", Globe and Mail, 7 October, 1980, p. B2.
6. Angevine, G.E., The Impact of a Sharp Oil Price Increase, Calgary, Canadian Energy Research Institute, Study No. 11, June 1980, pp. 1-90.
7. Artus, J.R., "An Economic Analysis of International Travel", International Monetary Fund Staff Papers, Vol. xix, No. 3, November 1973, p. 579-613.
8. Askin, A.B. (ed.), How Energy Affects the Economy, Lexington, D.C. Heath and Co., 1978, pp. 1-130.
9. Auf der Maur, F., A Report of the Need to Charge Competitive International Fuel Prices for International Flights at Canadian Airports, Montreal, Committee for an Independent Canada, Report #2, May 1980, pp. 1-44.
10. Bach, A.A., "Transportation and Energy", Forum, Roads and Transportation Association of Canada, Vol. 1, No. 3, 1978, pp. 55-57.
11. Baillie, J. Gerald, "Recent International Travel Trends in Canada", The Canadian Geographer, Vol. xxiv, No. 1, Spring 1980, pp. 13-21.
12. Blair, A., "The Emergence of the Auto as a Free Vote Mode", Opportunities in Canadian Transportation, Science Council of Canada, Report #2, October 1979, pp. 25-34.

13. Bank of Montréal, "Some Aspects of the Oil Price Question", Monthly Newsletter, November 1979, pp. 2-5.
14. _____, "Recession Takes Hold", Monthly Newsletter, August 1980, pp. 1-5.
15. Barrett, C.A. and London, A., "The Canadian Balance of Payments: Canada's Growing Travel Deficit", The Canadian Business Review, Ottawa, Summer, Vol. 4, No. 3, 1977, pp. 37-40.
16. Barry, J.D., Tourism and Energy, Overview and Recommendations, Ottawa, Tourism Industry Association of Canada, February 1980, pp. 1-11.
17. Becker, B. W., Brown, D.J. and Schary, P.B., "Behavior of Car Owners During the Gasoline Shortage", Traffic Quarterly, Vol. 30, No. 3, July 1976, pp. 469-483.
18. Brady, Robert V., "Some Public Energy Attitudes and Behaviour Differences Between Barrie, Ontario, and Red Deer, Alberta", in Jackson, Edgar L. and Foster, Leslie T., (ed.) Energy Attitudes and Policies, Victoria, Cornett Papers #2, 1980, pp. 107-124.
19. Brennan, R.P., "The Automobile's Endangered Future", The Futurist, October 1979, pp. 317-323.
20. Brodman, J.R. and Hamilton, R.E., A Comparison of Energy Projections to 1985, Paris, International Energy Agency Monograph, O.E.C.D. January 1979, pp. 1-156.
21. Brouwer, Peter, "The Delta Story", Canadian Hotel and Restaurant, November 1980, pp. 22-35.
22. Brown, L.R., Flavin, C and Norman C., "The Future of the Automobile in an Oil Short World", The Futurist, December 1979, pp. 447-458.
23. Bureau of Management Consulting, Energy and Tourism, Ottawa, Supply and Services Canada, sponsored by the Canadian Government Office of Tourism, Industry, Trade and Commerce, May 1980, (Draft) pp. 1-251.
24. Burke, J.F. and Williams, P.W., "Gasoline Prices and Availability: What do they mean for Tourism", Utah Tourism and Recreation Review, Vol. 8, No. 3, July 1979, pp. 1-5.
25. Butler, R.W., "Problems in the Prediction of Tourist Development", Studies in the Geography of Tourism, Salzburg, I.G.U. Workshop, May 1973, pp. 46-63.
26. Butler, R.W. and Stankey, G., 1979 Delphi Investigation of Impacts of Changing Energy Conditions in Outdoor Recreation and Tourism, London, University of Western Ontario, 1980, unpublished.
27. Canada Gazette, "Energy Supplies Emergency Act, 1979", Part III, Vol. 4, No. 7, pp. 1-27.

28. _____, "Mandatory Allocation Program", Part I, November 1980, pp. 1-20.
29. Canadian Government, Office of Tourism, Tourism Facts Book, Economic Research Section, 1980.
30. _____, Vacation Travel by Canadians, Toronto, Traveldata Ltd., 1972-1979.
31. _____, Canadian Travel Survey, CTS Research Bulletin, No. 1-4.
32. Carmichael, J.H., "World Oil Cartel May Take Shape", New York Times, 25 September, 1960, p. F1.
33. Chau, Peter H.N., Framework for Classification, Prioritization and Standardization of Tourism Statistics, Ottawa, Canadian Government Office of Tourism, pp. 1-9.
34. Chib, S.N., "The Effects of the Energy Crisis on Tourism", World Travel, No. 152, Jan./Feb. 1980, pp. 33-34.
35. Clawson, M. and Knetsch, Jack L., Economics of Outdoor Recreation, Baltimore, J. Hopkins U. Press, 1966, p. 43, and 61-63.
36. Constable, G.A., "Canadian Energy Scenarios 1975-2010", Role of the Automobile, Transport Canada, Strategic Planning Group, Working Paper #12, November 1978, pp. 1-43.
37. Cook, S. and Frechtling, D.C., "The Changing Cost of Travel in the United States", Journal of Travel Research, Vol. xiv, No. 3, Winter 1974, pp. 1-5.
38. Corsi, T.M. and Harvey, M.E., "Travel Behaviour Under Increases in Gasoline Prices", Traffic Quarterly, October 1977; pp. 605-624.
39. _____, "Toward a Casual Model to Explain Differing Household Vacation Patterns as a Result of Higher Fuel Prices", Journal of Leisure Research, Vol. 10, No. 4, 1978, pp. 298-310.
40. _____, "Changes in Vacation Travel in Response to Motor Fuel Shortages and Higher Prices", Journal of Travel Research, Vol. xvii, No. 4, Spring 1979, pp. 7-11.
41. Crow, R.T., and Savitt, J., "The Impact of Petroleum Shortages on Inter-City Travel and Model Choice", Transportation Research, Vol. 8, 1974, pp. 383-397.
42. Curtin, Richard T., "Consumer Adaptation to Energy Shortages", Journal of Energy and Development, Vol. 11, No. 1, Autumn, 1976, pp. 38-39.

43. D'Amore, L., Tourism in Canada - 1986, A Delphi Survey conducted for the Canadian Government Office of Tourism, Montreal, October 1976, pp. 1-108.
44. _____, "World Energy Requirements - A Historical and Future Perspective", The Business Quarterly, Winter 1979, pp. 49-62.
45. Davey, H.M., "The relative cost of gasoline", Globe and Mail, 13 October, 1980, p. 6 (letter to the editor).
46. Davis, W.J., "Energy: How Dwindling Supplies Will Change Our Lives", The Futurist, August 1978, pp. 258-267.
47. Donnelly, M. and Latham, J., "Energy and Tourism: What Happened in '74", Recreation Review, Vol. 4, No. 3, August 1975, pp. 7-22.
48. Duffield, Brian S., The Effects of Changing Energy Conditions on Outdoor Recreation Participation - The British Perspective, paper delivered at A.A.G., Louisville, Kentucky, April 1980, pp. 1-15.
49. Economic Council of Canada, Two Cheers for the Eighties, Ottawa, Supply and Services Canada, 1979, pp. 1-91.
50. Energy, Mines and Resources, An Energy Strategy for Canada (Summary), Ottawa, 1976, pp. 1-31.
51. _____, Canadian Oil and Gas Supply/Demand Overview, Ottawa, November 1979, pp. 1-98.
52. _____, Energy Conservation in Hotels and Motels: Review of Canadian and U.S. Studies, Surveys, Programs and Publications, Ottawa, Building Series #2, 1979, pp. 1-68 and 1-242.
53. Financial Post, "Facilities: the fever spreads, construction pace rapid", 24 August, 1974, pp. 22-24.
54. Frayne, A., "Scenarios for the Role of the Automobile", Role of the Automobile, Transport Canada, Strategic Planning Group, Working Paper #18, January 1979, pp. 1-235.
55. Harrison, F., "Odds mount: mid-80s oil crisis", Financial Post, 21 June, 1980, p. 1.
56. Hammarskjöld, D.G., "Fuel Problems make airlines wiser", Canadian Travel Courier, 2 October, 1980, pp. 7, 19 and 22.
57. Healy, D. "Oil Money and Recession", Foreign Affairs, Vol. 58, No. 2, Winter 1979/80, pp. 217-230.
58. Humphries, D.K., Joselyn, R.W. and Robertson, D.H., "The Hidden Bias in Recent Travel Research, The Gasoline Crisis", Journal of Travel Research, Fall 1973, pp. 15-16.

59. Hunt, John D., "Tourism in the Second Half of the 70s", Utah Tourism and Recreation Review, Vol. 4, No. 1, 1975, pp. 1-5.
60. International Energy Agency, Crude Oil Import Prices 1973/1978, O.E.C.D. 1979, pp. 1-12.
61. Iton, John, The Economic Impact of the 76 Olympic Games, Office of Industrial Research, Montréal, McGill U., 1977, pp. 76 and 77.
62. Jackson, Edgar L. and Foster, Leslie T. (ed.) Energy Attitudes and Policies, Victoria, Cornett Papers #2, 1980, pp. 1-192.
63. Jackson, Edgar L., "Perceptions of Energy Problems and the Adoption of Conservation Practices in Edmonton and Calgary", The Canadian Geographer, xxiv, No. 2, 1980, pp. 114-130.
64. Jacobs, A.H. and Foster L.T., "Socio-Economic Correlates of Energy Attitudes and Behaviour in Metropolitan Toronto", in Jackson, Edgar L. and Foster, Leslie T., (ed.) Energy Attitudes and Policies, Victoria, Cornett Papers #2, 1980, pp. 75-92.
65. Kamp, B.D., Compton, J.L. and Hensarling, D.M., "The Reactions of Travellers to Gasoline Rationing and to Increases in Gasoline Prices", Journal of Travel Research, Summer 1979, pp. 37-41.
66. Keller, Gerald and McDougall, Gordon H.G., "Energy Attitudes and Behaviour of Canadians (1975-1979)", in Jackson, Edgar L. and Foster, Leslie, T., (ed.) Energy Attitudes and Policies, Victoria, Cornett Papers #2, 1980, pp. 19-34.
67. Khan, A.M., "Travel's Telecommunications: Current Understanding", High Speed Ground Transportation Journal, Vol. 10, No. 3, Fall 1976, pp. 203-216.
68. _____, Review of Energy Factors in Canadian Intercity Passenger Transportation Policy and Planning Studies, Ottawa, Carleton University, March 1979, pp. 1-44.
69. Klopchic, P., Implications of the Energy Shortage on Tourism and Outdoor Recreation in Ontario, Toronto, Ontario Ministry of Industry and Tourism, January 1974, pp. 1-27.
70. Kruschke, Earl R., Tourism and Energy Consumption, paper presented to the American Anthropological Association, Mexico City, November 1974, pp. 1-16.
71. Lansberg, H.A. et al., Energy and the Social Sciences, An Examination of Research Needs, Washington, Resources for the Future, Inc., 1974, pp. 23-57.
72. Lave, C.A. "The Mass Transit Panacea and Other Fallacies about Energy", Atlantic, October 1979, pp. 39-43.
73. Laventhol and Horwath, Trend of Business in Hotels, Toronto, (monthly).

74. _____, Trends, 1972-1979, (annual).
75. Levy-Pascal, E., "Will the Rising Price of Energy Push Us Over the Cliff", The Futurist, December 1979, pp. 477-480.
76. Levin, S., "Travelling the U.S. - Effects of the Oil Crisis", Canadian Business, July 1974, pp. 36, 37 and 44.
77. Levy, W.J., "The Years That the Locust Hath Eaten: Oil Policy and OPEC Development Prospects", Foreign Affairs, Vol. 52, No. 2, Winter 1978/79, pp. 287-305.
78. _____, "Oil and the Decline of the West", Foreign Affairs, Vol. 58, No. 5, Summer 1980, pp. 999-1015.
79. Liden, F., A. Nation at the Pumps - who uses all that Gas", Across the Board, March 1980, pp. 68-70.
80. Logan, D., "Resort operators bemoan drop in U.S. visitors", Globe and Mail, 16 July, 1979, pp. 1 and 2.
81. Long, M.E., "They're Redesigning the Airplane", National Geographic, January 1981, p. 99.
82. MacDonald, N.B., "The Automotive Industry", Opportunities in Canadian Transportation, Auto as Mode/Industry, Science Council of Canada, Report #2, October 1979, pp. 79-90.
83. _____, "Canadian Automotive Industry", Opportunities in Canadian Transportation, Auto as Mode/Industry, Science Council of Canada, Report #2, October 1979, pp. 91-132.
84. _____, "Auto Industry Prospects", Opportunities in Canadian Transportation, Intercity Passenger Transport Conference, Science Council of Canada, Report #5, May 1980, pp. 211-218.
85. _____, The Future of the Canadian Automobile Industry in the Context of the North American Industry, Science Council of Canada, Working Paper #2, November 1980, pp. 1-195.
86. Matley, I., The Geography of International Tourism, A.A.G. Resource Paper, No. 76-1, 1976, p. 16.
87. McCool, S.F. et al., "The Energy Shortage and Vacation Travel", Utah Tourism and Research Review, May 1974, pp. 1-5.
88. McCracken, M.C., Canadian Energy Policy - What are the Imperatives, Informetrica, Ottawa, October 23, 1980, pp. 1-13.
89. McDougall, L., The Study of Provincial Park Trends Over the Past Five Years and Implications of the Energy Crisis, Ryerson Polytechnical Institute, Fall 1980, pp. 1-18, (unpublished).

90. Mitchell, Lisle S., The Geographer's Contribution to Tourism Research, The Travel Research Association, San Antonio, Texas, 2 June 1979, pp. 1-7.
91. _____, "The Geography of Tourism An Introduction", Annals of Tourism Research, July/Sept. 1979, pp. 235-244.
92. _____, "The Geographer's Contribution to Tourism Research", The Travel Research Association 10th Annual Conference Proceedings, San Antonio, Texas, October 1979, pp. 325-329.
93. Moncrief, L.W., Mouser, T.W. and Pitrak, P. "The Influence of Gasoline Prices and Availability Upon Recreation Travel Propensity", Energy Communications, Vol. 3, No. 5, 1977, pp. 431-447.
94. Morici, P., "Impact of Higher Oil Prices on Economic Growth in the Industrial Economies", in Askin, A.B., How Energy Affects the Economy, Lexington, D.C. Heath and Co., 1978, p. 35-49.
95. Motor Vehicle Manufacturers Association, Facts and Figures '80, 1980, pp. 1-17.
96. Murray, James R. et al., "Evolution of Public Response to the Energy Crisis", Science, Vol. 184, 19 April 1974, pp. 257-263.
97. Murrell, D. and Sheridan, J., "Move to World Gasoline Prices", The Canadian Business Review, Autumn 1980, pp. 29-32.
98. Odell, P.R., Oil and World Power, Middlesex, Penguin Books, 1974, pp. 1-231.
99. Olson, Steve, "Prospects for the Auto: Sputtering Towards the 21st C.", The Futurist, February 1980, pp. 27-34.
100. Ontario Economic Council, Policies for Ontario's Energy Problem, Toronto, 1980, pp. 1-48.
101. Ontario Ministry of Natural Resources, A Comparative Analysis of Various Campgrounds Outside Ontario with An Emphasis on Camping in Ontario, Toronto, 1980, pp. 1-59.
102. Ontario Ministry of Treasury and Economics, The Effect of Rising Energy Prices on Tourist Operators in Rural Ontario, Economic Development Branch, January 1980, pp. 1-12.
103. Options '80, Tourism and the Energy Crisis, the Atlantic Insight Conference Series, 4-7 November 1979, (summary program) pp. 1-24.
104. Organization for Economic Co-operation and Development, Tourism Policy and International Tourism in OECD Member Countries, Paris, July 1979, p. 13.
105. Oski, C.K., "The Potential for Fuel Conservation: The Case of the Automobile", Transportation Research, Vol. 8, 1974, pp. 247-257.

106. Pearce, Douglas G., "Towards a Geography of Tourism", Annals of Tourism Research, July/Sept. 1979, p. 248.
107. Petroleum Economist, August 1980, pp. 342 and 348.
108. Pindyck, R.S., The Structure of World Energy Demand, Cambridge, The M.I.T. Press, 1979, pp. 1-233.
109. Plog, S.C., "Why Destination Areas Rise and Fall in Popularity", The Cornell Hotel and Restaurant Administration Quarterly, February 1974, pp. 55-58.
110. Powell, John (Chairman), A Report by the Sector Task Force on the Canadian Tourism Industry, Ottawa, Industry, Trade and Commerce, 12 July, 1978, pp. i-36.
111. Province of Nova Scotia, Energy Outlook 1990, Halifax, November 1979, pp. i-61.
112. Rajotte, F., "The Different Travel Patterns: Spatial Framework of Recreation and Tourism", in Tourism as a Factor in National and Regional Development, I.G.U. Working Group, Occasional Paper #4, September 1974, pp. 43-52.
113. Ritter, W., "Recreation and Tourism in Islamic Countries", Ekistics, No. 236; July 1975, pp. 56-59.
114. Roberts, J. Frank, "The Energy Crisis' Effect on Tourism", Canadian Travel Courier, 10 January, 1980, pp. 7, 9 and 12.
115. Robinson, G.W.S., "The Recreation Geography of South Asia", Ekistics, No. 208, March 1973, pp. 139-144.
116. Rosenow, J.E. and Pulsipher G.L., Tourism: the good, bad and the ugly, Lincoln, Century Three Press, 1979, pp. 231-248.
117. Rustow, D.A., "U.S.-Saudi Relations and the Oil Crisis of the 1980s", Foreign Affairs, Vol. 55, No. 3, April 1977, pp. 494-516.
118. Sacco, J.F. and Hajj, H.M., "Impact of the Energy Shortage on Travel Patterns and Attitudes", Transportation Research Record, Vol. 561, 1976, pp. 1-11.
119. Sadler, Barry, "Social Attitudes and Energy Policy: Dimensions and Implications", in Jackson, Edgar L. and Foster, Leslie T. (ed.), Energy Attitudes and Policies, Victoria, Cornett Papers #2, 1980, pp. 175-192.
120. Saurin, A., "Economic Determinants of Tourist Demand: A Survey", Tourist Review, Berne, No. 1, January-March, 1978, pp. 2-4.
121. Science Council of Canada, Opportunities in Canadian Transportation, Industry Passenger Transport Conference, Ottawa, Report #1, 17/18 May, 1979, pp. 8-162.

122. _____, Opportunities in Canadian Transportation, Auto as a Mode/Industry Sub-Conference, Toronto, Report #2, 4/5 October, 1979, pp. 5-130.
123. _____, Opportunities in Canadian Transportation, Air as a Mode/Industry Sub-Conference, Edmonton, Report #4, 29/30 November, 1979, pp. 5-131.
124. _____, Opportunities in Canadian Transportation, Inter-city Passenger Transport Conference, Ottawa, Report #5, 21/22 May, 1980, pp. 5-270.
125. Schümlester, S., Tourism and the Business Cycle, Vienna, Austrian Institute of Economic Research, 1979, pp. 5-141.
126. Serot, D.E., "The Energy Crisis and the United States Economy, 1973-75", in Askin, A.B. (ed.), How Energy Affects the Economy, Lexington, D.C. Heath and Co., 1978, pp. 7-22.
127. Skipka, Beverly D., Tourism and Energy, paper presented to the New York Chapter of the Travel Research Association, 26 February, 1974, pp. 1-13.
128. Silversides, A., "Delta seen as Canada's fastest expanding hotel chain", Globe and Mail, 26 January, 1981, p. B12.
129. Sims, L., "Automobile Ownership and Usage in Canada - 1976", Role of the Automobile, Transport Canada, Strategic Planning Group, Working Paper #16, January 1979, pp. 1-48.
130. Slagorsky, C.Z., Energy Use in Canada in Comparison with Other Countries, Calgary, Canadian Energy Research Institute, Study No. 8, June 1978, pp. 1-78.
131. Smith, D.C., Energy and Recreational Travel: An Overview, presented to the CAGONT/ELDAAG Annual Meeting, London, Ontario, November 1980, pp. 1-18.
132. Solomon, P.J. and George, W.R., "An Empirical Investigation of the Effect of the Energy Crisis on Tourism", Journal of Travel Research, Vol. xiv, No. 3, Winter 1976, pp. 9-13.
133. Statistics Canada, Principle Taxes in Canada, Ottawa, Cat. No. 68-201E, 1978, pp. 34 and 35.
134. _____, Travel Between Canada and Other Countries, Ottawa, Cat. No. 66-201, annual 1972-1979.
135. _____, Travel to Work, Ottawa, Cat. No. 87-001, Vol. 3, No. 7, p. 2.
136. Stobaugh, R. and Yergin, D., (ed.), Energy Future, New York, Random House, 1973, pp. 3-55.

3 3

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9

137. Tait, A.A. and Morgan, D.R., Gasoline Taxation in Selected OECD Countries, 1970-79, International Monetary Fund Staff Papers, Vol. 27, No. 2, June 1980, pp. 349-379.
138. Thur, L.M., Canadian Energy Supplies in the 1980's and the Consequences for Tourism, presented to the Atlantic Insight Conference "Tourism and the Energy Crisis", Halifax, November 1979, pp. 1-19.
139. Time, "The 1980s Generation", 14 August 1978, pp. 31-42.
140. Transport Canada, The Future of the Automobile in Canada, Ottawa, Strategic Planning Group, April 1979, pp. 1-62.
141. _____, The Allocation of Transportation Fuel and the Transportation of Domestic Crude Oil in the Event of Oil Import Reductions, Ottawa, Strategic Planning Group, December 1980, p. 76.
142. Travel Pulse 1979-80, Travel and Tourism Consultants International in co-operation with Oxotoby-Smith, Inc., 1979, pp. 26-50.
143. United States Travel Service, The Impact of the 1979 Gasoline Shortage on the U.S. Travel Industry, Washington, May 1980, pp. 1-25.
144. Waddingham, D.G., Financing Canadian Energy Projects, paper presented to Canadian Society of Petroleum Geologists, Calgary, 29 September, 1980, pp. 1-20.
145. Wagner, F.W. and Donohue, T.R., "The Impact of Inflation and Recession on Leisure in New Orleans", Journal of Leisure Research, Vol. 8, No. 4, 1976, pp. 300-306.
146. Wall, Geoffrey, Recreational Land Use in Southern Ontario, Waterloo, Department of Geography Publication, Series No. 14, 1979, p. 63.
147. Waters, S.R., "World Travel and the Energy Inflation", Cornell Hotel and Restaurant Administration Quarterly, November 1974, pp. 2-7.
148. Westall, Dan, "Gasoline price crunch creates a big wave of swimming pool sales", Globe and Mail, 7 July, 1979, p. B16.
149. Willenborg, J.F. and Pitts, R.E., "Gasoline Prices: Their Effect on Consumer Behavior and Attitudes", Journal of Marketing, Vol. 41, No. 4, 1977, pp. 24-31.
150. Williams, P., Burke, J.F. and Dalton, M.S., "The Potential Impact of Gasoline Futures on 1979 Vacation Travel Strategies", Journal of Travel Research, Summer 1979, pp. 3-7.

151. Williams, P. and Jacobs, H., A Delphi Analysis of Energy Impact on Caribbean Tourism, Toronto, Ryerson Polytechnical Institute, November 1980, pp. 1-14.
 152. Wilks, Jill, "Canada's airlines expect 'rough cut air policy' soon", Canadian Travel Courier, 13 November 1980, p. 37.
 153. World Travel, "Development of international tourism in 1979 and prospects for 1980", No. 153, March-April 1980, p. 9.
 154. Wolfe, R.I., A Scenario for World Class Tourism Under Terminal Stress, paper presented to A.A.G., New Orleans, April 1979, pp. 1-10.
 155. _____, "Patterns of Recreational Highway Traffic in Time of Energy Scarcity: A Progress Report", Proceedings, Second Congress of Leisure Research, 1979, pp. 1-13.
 156. _____, "Predicting Recreational Highway Traffic in Canada at a Time of Scarcity and High Cost of Motor Fuels", Contributions to the Geography of Tourism, Vienna, Vol. 1, 1979, pp. 126-129.
 157. Wurzel, A., "Future Development of Tourism", The Tourist Review, No. 2, May/June, 1980, pp. 2-7.
 158. Zalatan, A. and Burdge, R., "The Future of U.S. International Tourism: Some Neglected Facts", Journal of Travel Research, Spring, 1980, pp. 15-19.
 159. Zim, L., "Energy Conservation in the Food Service Industry", Canadian Restaurant Association Digest, Vol. 1, No. 5, 1976, pp. 1-4.
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