

WORKING PAPER:

A Critical Look at Vermont's Economy: Past, Present, and Future

January 1993

TABLE OF CONTENTS

EXECUTIVE SUM	MARY
GUIDELINES FOR	ASSESSING THE ECONOMIC IMPACT OF POLICY AND LEGISLATIVE INITIATIVES
PART I: VERMON	1'S ECONOMY: A PERFORMANCE EVALUATION
Introduction	on
	ce ChangedForever
	of the Vermont Recession
	Job Loss in Vermont
	rence Between Cyclical and Structural Change
	rformance and Outlook for Vermont Industries
	High-technology and computer industries
	The machine tools sector
	Resource-based processing industries
	The consumer products sector
	The defense sector
	The construction industry
	Finance, insurance, and real estate
	Services
	Government
	Travel and tourism
	Agriculture
	Higher education
PART II: THE CO	MPETITIVE ADVANTAGES AND DISADVANTAGES OF VERMONT'S ECONOMY
T . 1 .	2
	on
	Vermont's workforce: Our human capital resource
	Banking situation and conditions
	Quality of life
	Proximity to Canada
	Capitalizing on Vermont's "good" name
	Accessible government
	Small business and entrepreneurial inclination
Competiti	ve "Swing" Factors
	Infrastructure
	Telecommunications
	Higher education
	Travel and tourism
	Regulation
	Corporate Code
Competiti	ve Disadvantages
	Geographic location
	Energy costs
	Lack of industrial diversity
	Tax burden and tax rate levels
	Availability of affordable capital
CONCLUSION	
APPENDIX	

EXECUTIVE SUMMARY

Introduction

Like the entire New England region, Vermont faces enormous economic challenges. We entered the current recession earlier, have stayed longer, and gone far deeper than anyone could have anticipated. And this recession is different from previous down cycles: Vermonters are losing their jobs permanently in several of our key industrial sectors. This permanent job loss is having a significant and negative spillover effect on people all over the state and on the economy as a whole.

We need to understand why our state has suffered so much more than the rest of the country and what can and should be done to effectively deal with the causes of our economic problems. Assessing what is wrong requires a detailed look at Vermont's economic structure within the context of the regional and national economies. Vermont's economy is at a turning point. The sluggish U.S. recovery provides Vermont with an opportunity to take difficult steps to resolve the state's long-term problems and spark a lasting economic revival. If we fail to address our basic economic problems, we risk continuing the region's and the state's economic decline.

The Vermont Business Roundtable believes we must develop a new consensus for action: it is time to find *real solutions* to Vermont's fundamental economic problems. We must recognize that as business people, public sector leaders, and private citizens we have common interests and share similar goals for Vermont's future. Only if Vermont businesses can succeed in the increasingly competitive global economy will it be possible for Vermonters to have the financial capacity to enjoy the quality of life and social infrastructure that we so desire.

Performance Evaluation

To understand where Vermont's economy is today, it is important to recall the state's past economic performance. During the late 1970s and the early to mid-1980s, the Vermont economy experienced a dramatic upswing, largely attributable to the growth of the computer industry in New England, the strategic defense build-up, and the growth of the construction and financial services industries. Incomes of Vermonters grew and employment surged to previously unheard of heights.

Current employment statistics confirm that the Vermont economy is experiencing a protracted period of great difficulty. Since March of 1989, Vermont has lost almost 20,000 jobs, representing nearly seven and a half percent of the state's entire non-farm employment base. Since Vermont's manufacturing employment peaked in the spring of 1985, our state has lost a total of 7,100 of its highest-paying, goods-producing jobs. That figure represents a disturbingly high total of 14.2 percent of our 1985 factory job base.

This loss of jobs in Vermont can be attributed to a number of factors. While it is difficult to say just how great an impact a given factor has had on the alarming employment decline, the most important ones appear to be:

- Problems associated with the national recession and subsequent weak recovery.
- The end of the national defense build-up.
- Maturation of the high-technology and computer industries.
- Problems in agriculture.
- Loss of Vermont's and New England's cost competitiveness.
- Restructuring in financial services.

In many ways, our current economic and employment problems can be traced to the complacency that arose from the prosperity of the late 1970s and the 1980s. The public and private investments that should have been made then were not, and the 1990s have brought a competitive landscape that is fundamentally different from the earlier prosperous period. The region is not prepared for the new nationally and globally sensitive competitive pressures.

The people of Vermont and public sector leadership must understand that while the government does not compete directly in the global economy, it does play a critical role in shaping the competitive environment in which all Vermont businesses must conduct their affairs. Public policy has a significant impact on the state's competitive situation, and on the ability of its economy to create high-paying jobs and tax revenues to pay for protecting the environment and assuring a social safety net that is adequate to meet what are expected to be growing needs.

To understand the prospects for Vermont's economy, it is necessary to identify and gauge the strength and competitive position of the Vermont economy's principal component parts. The final section of Part I of this report presents capsule information about the history, current situation, and growth prospects for key sectors of the Vermont economy, including: high-technology and computers; machine tools; resource-based processing; consumer products; defense; construction; finance, insurance, and real estate; services; government; travel and tourism; agriculture; higher education.

Competitive Advantages and Disadvantages

Vermont's current economic situation has focused increased attention on how our state compares with its competitors. It is not easy to assess just how well we "measure up" to other states in the region and the nation, how "attractive" Vermont is to potential businesses, or how well equipped we are to persuade businesses to relocate here. What constitutes a state's or region's attractiveness to business is very difficult to objectively verify and often involves some form of subjective interpretation on the part of the researcher or investigator.

This study, however, does not deliver a judgment of how friendly the state of Vermont is to business. Instead, it attempts to identify some key criteria and factors that can be used by: (1) business people in evaluating the viability of operating their businesses in Vermont and (2) public officials in evaluating the potential economic impact of policy and legislative initiatives.

The result of this research makes a convincing point: the principal problem facing Vermont and the New England region is a loss of the ability to compete with other domestic and foreign concerns. Vermonters must recognize that the security of their jobs--and the strength and character of our state--depends to a great degree on the ability of Vermont businesses to compete with companies that just a few short years ago were considered too far away to pose a competitive threat.

Vermont does enjoy a number of *competitive advantages* as it conducts business around the region, the nation, and the world. Public policies should continue to nurture these advantages, which are reviewed in the report: workforce; banking situation and conditions; quality of life; proximity to Canada; Vermont's "good" name; accessible government; and small business and entrepreneurial inclination.

Some other factors that have had, and are likely to continue to have, a major impact on the state's economy are "neutral" or "mixed" from a competitive standpoint, including infrastructure (transportation, telecommunications, higher education, travel and tourism); regulation; and the corporate code. These "swing" factors represent a critical group of competitive forces that could either help or hinder the state's economic performance over the next decade, and they present a significant opportunity for policy makers to improve Vermont's relative competitiveness.

Several economic performance determinants are likely to remain negative from a relative competitiveness standpoint. The report describes five **competitive disadvantages** which have varying potential to be addressed by public policy over the short or intermediate term. They are geographic location, high energy costs, lack of industrial diversity, high tax burden and tax rate levels, and the rationing of affordable capital.

Conclusion

The Vermont Business Roundtable presents the results of these two economic studies-an evaluation of the performance of Vermont's economy and an assessment of Vermont's competitive status--to provide a better understanding of the nature of the state's current economic condition. It is essential that Vermonters understand every aspect of Vermont's dynamic economy if we are to come up with sustainable, long-term strategies to enhance our state's economic strength and competitiveness now and in the future. We must work together, remembering that these difficult times provide us with the opportunity to change course and pursue a brighter future not only for ourselves, but for future generations of Vermonters.

GUIDELINES FOR ASSESSING THE ECONOMIC IMPACT OF POLICY AND LEGISLATIVE INITIAL, VES

These guidelines represent some of the key criteria and factors that (1) business people may use in evaluating the economic and competitive viability of operating their businesses in Vermont and (2) public officials may use in evaluating the potential economic and competitive impact of policy and legislative initiatives. The Vermont Business Roundtable intends that this information aid in the development of new strategies for action in support of a long-term, sustainable effort to revitalize Vermont's economy. The Roundtable believes Vermont's social and environmental agenda can only be met within the context of a healthy and growing Vermont economy.

PART 1: EVALUATION OF ECONOMIC IMPACT

Evaluate the proposed initiative as positive \uparrow , neutral \rightarrow , or negative \downarrow based on your assessment of the initiative's consistency with the intent of each of the four following principles:

■ HELPS VERMONT'S CURRENT EMPLOYERS MORE EFFECTIVELY COMPETE IN TODAY'S GLOBAL ECONOMY ↑ → ↓

Initiatives should recognize that the majority of Vermont's employment growth comes from its existing employment base and initiatives should help strengthen the competitiveness of these Vermont firms in the increasingly competitive global economy.

■ STIMULATES JOB AND INCOME GROWTH TO INCREASE THE GENERAL LEVEL OF ECONOMIC ACTIVITY IN VERMONT + +

Initiatives should increase the general level of economic activity in Vermont and should focus on supporting those employment categories that are dependent on healthy economic activity in the state.

■ ENHANCES THE COHERENCE AND PREDICTABILITY OF REGULATION AND ENFORCEMENT IN VERMONT ↑ → ↓

regulatory structure while at the same time increasing consistency in the development and enforcement of state regulations. These measures would have broad applicability to most employment sectors in Vermont.

■ ASSISTS IN THE TRANSITION OF VERMONT'S EXISTING EMPLOYMENT BASE BY EASING THE ASSIMILATION OF DISPLACED WORKERS BACK INTO THE STATE'S LABOR FORCE † → ↓

Initiatives should help Vermonters make necessary conversions from declining industries to those that offer more future promise. Since Vermont policy makers have little impact on developments such as the end of the Cold War, maturation of the U.S. computer industry, and the increasing globalization of the U.S. economy, state initiatives must focus on minimizing the problems associated with these economic transitions.

PART 2: ASSESSMENT OF COMPETITIVE IMPACT

Evaluate the proposed initiative as positive †, neutral -, or negative † based on your assessment of the initiative's potential for (1) maintaining and nurturing our competitive advantages; (2) improving critical competitive swing factors (greatest potential for policy impact); (3) making progress toward relieving competitive disadvantages.

■ COMPETITIVE ADVANTAGES ↑ →

State's workforce

Banking conditions
Quality of life
Proximity to Canada
Capitalizing on Vermont's "good" name
Accessible government
Small business/entrepreneurial inclination

■ SWING FACTORS ↑ → ↓

Infrastructure

Telecommunications
Higher education
Travel and tourism
Regulation
Out-dated corporate code

■ COMPETITIVE DISADVANTAGES ↑ →

Geographic location
Energy costs
Lack of industrial diversity
Tax burden and tax rate
Availability of affordable capital

PART 3: POTENTIAL IMPACT ON OVERALL STATE ECONOMY

Evaluate the significance of the proposed initiative as positive ↑, neutral →, or negative ↓ based on your assessment of the initiative's potential impact on the overall state economy.

PART I VERMONT'S ECONOMY: A PERFORMANCE EVALUATION

Introduction

Today the Vermont economy is at a critical juncture. Like the economy of the entire New England region, our state faces enormous challenges. Vermont entered its current economic recession earlier, has stayed longer, and has gone far deeper than all but a handful of states around the country. Because our current economic slide is much different than a typical business cycle, economic recovery in the traditional sense is in no way as assured as it has been in the past.

The current economic downturn, which continues to cause thousands of Vermont families severe financial hardship, is due to many factors. One of the most important features separating this recession from the many other down cycles we have experienced is the fact that Vermonters are losing their jobs *permanently* in several of Vermont's key industrial sectors, including manufacturing, financial services, and agriculture. This permanent job loss is having a significant and negative spillover effect to many of the state's other major employment categories, including services and retail trade, which for the most part derive their strength from the goods-producing sector of our economy.

This uncommonly long and unusually deep decline in Vermont's economy suggests that many of the fiscal and social problems associated with this recession are likely to continue for some time. What is needed is a new consensus for action to find real solutions to address Vermont's fundamental economic problems. This will require a new level of public and private sector collaboration and cooperation. If we want a genuine and lasting revival of Vermont's economy, and if we are to have any hope of competing effectively in today's intensely competitive global economy, the status quo will simply not do.

As business people, government officials, and Vermont's citizens we must all recognize that we have common interests and share similar goals for Vermont's future. As a state, we must recognize that only if Vermont businesses can succeed in the increasingly competitive global economy will it be possible for Vermonters to have the financial capacity to enjoy the quality of life and social infrastructure that we so desire.

The Vermont Business Roundtable believes these difficult times provide us with the opportunity to change course and pursue a brighter future not only for ourselves, but for future generations of Vermonters. This analysis is the first part of a broader effort by the Roundtable to develop new strategies for action. It is the Roundtable's goal to implement a *long-term*, *sustainable* effort to provide expanded employment opportunities for Vermonters and their families.

Our members agree that the only way to truly protect Vermont's environment and enhance its safety net of social service programs is through economic progress and the creation of quality, high-paying jobs. As business leaders, we recognize our responsibility and the important role we have in helping to revitalize Vermont's economy. The Vermont Business Roundtable has therefore undertaken this effort on behalf of all individuals and groups who are concerned about the Vermont economy and what Vermont will become in the next century.

Times Have Changed--Forever

Throughout most of the twentieth century, the people of Vermont have taken pride in the protection of the state's traditions: a working rural landscape and a clean environment. This legacy has been encouraged, even though it has often meant that the standard of living of many Vermonters has not increased as fast as it has for people living in other parts of the country.

In recent times, particularly during the late 1970s and the early to mid-1980s, the fortunes of the Vermont economy turned dramatically upward. The substantial growth of the computer industry in New England, the strategic defense build-up, and strong growth in the regional financial services industry, among others, caused incomes of Vermonters to grow faster than those of the nation as a whole, and employment levels escalated at previously unheard of rates.

In 1988, Vermont's per capita income, expressed as a percentage of U.S. per capita income, rose to 95.3 percent of the U.S. average, ranking the state 25th highest in the nation--the highest relative ranking Vermont had ever achieved. This turnaround in the state's economic fortune represented a significant change for Vermonters and a dramatic departure from previous decades, when Vermont per capita income reached an all-time low ranking of 41st in the nation during the early 1950s.

This economic surge enabled the state's employers to pay increasingly higher wages and benefits to Vermont workers. In July of 1988, Vermont posted a 1.7 percent rate of unemployment, a level unprecedented not only for the state of Vermont but also for any state in the entire country up to that time.

In many ways, the state's and region's current economic problems can be traced to the complacency that arose from that success. Management, labor, and government became accustomed to extraordinary rates of economic growth during the period. The associated job and income growth produced a bonanza in increased tax receipts. Much of the growth in state government tax revenues during the mid- to late 1980s was spent on elementary and

secondary education, improving Vermont's social safety net, and on programs designed to help protect Vermont's environment.

Although those policy decisions by Vermont's elected officials increased the state government's burden on the economy, they appear to have accurately reflected the wishes of the majority of Vermonters at the time. While the findings of the Roundtable's "Pulse of Vermont: Quality of Life" study supported such program expansions, it should be noted that this study was conducted in the summer of 1989--just *before* Vermont's economy entered this protracted, deep economic decline.

In fact, as Vermont was experiencing that period of economic prosperity, some Vermonters and public officials believed that the state's strong rates of economic growth would continue indefinitely into the future. This was apparently true in other New England states, as well, based on the attention given to the New England regional economy in the context of the "Massachusetts Miracle." Many people began to take Vermont's and the region's economic growth for granted, including some in the business community. Attention increasingly focused on the "costs" or effects of economic growth as unemployment rates dropped to unprecedented low levels.

Meanwhile, a perception grew among some Vermonters that economic growth would inevitably lead to undesirable environmental or social change: that any economic growth involved either damage or degradation of the environment or greater inequalities in the distribution of income among Vermonters.

Public and private investments that should have been made during the prosperity of the 1980s were not made, and the arrival of the 1990s brought a competitive landscape that was fundamentally different from the prosperous period it followed. The region was ill prepared for the new nationally and globally sensitive competitive pressures.

¹ State aid to education grew by more than \$58.5 million in just four years during the late 1980s, from \$78,597,332 in FY 1986 to \$137,129,304 in FY 1990. This represents an average annual rate of increase of nearly 20 percent for the period.

² For example, during the late 1980s the Vermont Legislature passed initiatives to expand the Property Tax Relief Program and to expand the Medicaid Program beyond federal mandates.

³ For example, the Legislature established the Housing and Land Conservation Trust Fund in 1987 to help protect agricultural, natural, and recreational lands, housing, and historic properties, and in 1988 passed Act. 78 the state's solid waste law.

The Vermont economy is now clearly at a turning point. The current sluggish U.S. economic recovery provides Vermont with an opportunity to take difficult steps to resolve the state's long-term problems and spark a lasting economic revival. Failure to effectively deal with these basic problems will result in a continuation of the region's and the state's economic decline.

Although the problems of the national economy, the epidemic of corporate restructuring, and the impact of misguided fiscal and other governmental policies cannot be ignored, it seems clear that the principal problem confronting Vermont and the entire New England region is a loss of competitiveness with other domestic and foreign concerns. This loss in competitive position spans a wide range of industries in the state, from the apparel sector to the troubled machine tool industry. Major employment losses have also occurred in sectors dominated by a few larger employers such as furniture, defense, and computers, and those represented by many small firms such as the lumber and wood industries.

As we move further into the 1990s, all Vermont industries face challenges that are specific to the customers and markets they serve. However, each industry also faces problems that affect the state of Vermont and the New England region. If Vermont is to regain its competitiveness, entrepreneurs, product engineers, managers, and "front-line" workers must succeed in developing and marketing new products and services that can compete successfully in the national and global marketplace.

The people of Vermont and public sector leadership must understand that while the government does not compete directly in the global economy, it does play a critical role in shaping the competitive environment in which all Vermont businesses must conduct their affairs. Public policy has a significant impact on the state's competitive situation, and on the ability of its economy to create well-paid jobs and tax revenues to pay for protecting the environment and assuring a social safety net that is adequate to meet anticipated growing needs.

While most of the state's efforts should be directed toward solving state problems, decisions cannot be made in a policy vacuum that ignores the competitive realities of the global economy and the far-reaching impacts of federal policy. The full revival of the regional and Vermont economies is dependent on an integrated approach between the private sector and all levels of government. We, as members of the Vermont Business Roundtable, recognize our own responsibility in this effort and want to make a positive contribution. We know we have a lot to learn about participating actively in the public policy process, but we do believe that the friction, and sometimes outright conflict, between government and business must change if the revitalization of the state's economy is to become a reality. We know it is up to us as business leaders and Vermonters, to work with the general public and our elected officials to take control of the future.

A Profile of the Vermont Recession

The following description of the relative performance of the Vermont economy is intended to provide a framework for decision-making in both the public and private sectors. Employment levels or job counts were used as the main data source in this analysis, even though these data are not the only economic indicators that can be employed to assess economic performance. Since this information is more readily available by state and by industry than most other variables, the data requires only a minimum of adjustment to be effectively employed in this analysis (for example, the data used here are adjusted only for normal seasonal ups and downs in each industry).

Employment statistics clearly show that the Vermont economy is experiencing a protracted period of great difficulty. Since March of 1989, the assumed business cycle peak prior to the current recession, the Vermont economy has lost almost 20,000 jobs, representing nearly seven and a half percent of the state's entire non-farm employment base over just a three-and-a-half-year period. During that same time, the national economy added more than a half million jobs, despite an economic recession that was deeper and longer than originally anticipated.

Not since the Great Depression has there been a period of such extended and steep decline in employment in Vermont. Many of the reasons for this decline are tied to national and regional factors. Even so, the real issue facing Vermont--in the 1990s and beyond--is why the state's economy has suffered so much more than the rest of the country and what can and should be done to effectively deal with the causes of our economic problems. Assessing what is wrong requires a detailed look at Vermont's employment structure within the context of the national and regional economies.

Table 1 (see Appendix) includes Vermont's employment totals for selected years since 1972, which show that the employment growth news is not particularly good for Vermont's economy. Since 1972, Vermont has gained jobs in only ten of 19 major industrial employment categories, and only seven of 19 sectors since 1985. Over the same 1972 to 1992 period, Vermont gained jobs in only five of its 12 major manufacturing sectors, and, astonishingly, the state has managed to add jobs in only two of 12 major factory categories since 1985.

Nearly all of the "net" job growth in the Vermont economy over the last 20 years has occurred in the services, trade, finance,⁴ and government sectors. While growth in non-factory employment is important to many Vermonters, at least some of those jobs are dependent on factory work if they are to be sustained over the longer term. It is unlikely that

⁴ This category includes employment at banks, non-bank financial services companies, insurance companies, and real estate concerns.

Vermont's financial institutions, retail stores, and restaurants will remain "healthy" unless there is a viable and sound factory sector to help sustain them.

Table 2 (see Appendix) provides another perspective on the relative performance of the Vermont economy, comparing non-farm employment growth in Vermont with that of the nation as a whole. The statistics present Vermont's employment level as a percentage share of national employment in each industrial category. Such a comparison allows an examination of the state's competitive position, identifying which sectors of the state's economy may be doing better or worse than their counterparts nationally.

The "share" comparison also offers bad news for the Vermont economy. The state was able to increase its share of the national employment total in nine of 19 major industrial classifications and in only five of Vermont's 12 major factory sectors since 1972. From 1985 to 1991, Vermont lost employment share in a total of 11 of 19 industrial categories, managing to gain share in only two of the state's 12 major factory sectors--food and printing.

These statistics are reinforced by the seasonally adjusted employment numbers from the Federal Reserve Bank of Boston, which show that since Vermont's manufacturing employment peaked in the spring of 1985, our state has lost a total of 7,100 of its highest-paying, goods-producing jobs. That figure represents a disturbingly high total of 14.2 percent of our 1985 factory job base, and represents a level of job loss equal to more than 85 percent of the entire 1990 population of Vermont's capital city of Montpelier.

However, as troubling as those employment loss numbers are, the especially alarming conclusion raised is that Vermont's long-term decline in manufacturing has spread to virtually all of the state's factory sectors. Large losses in employment are no longer confined to our older and more mature manufacturing industries, which have been in decline for a number of years. Over the last three to four years, job losses have spread to the state's computer, electronic machinery, high-tech instruments, and niche-oriented food processing sectors. These sectors are the very same ones that just ten years ago were considered to be among Vermont's brightest and most promising industrial stars.

Sources of Job Loss in Vermont

During this difficult Vermont recession, the Vermont economy has lost jobs for a number of reasons. Sometimes the sources of job loss were readily apparent, though at times complex national and international forces were at work within the Vermont economy. While it is difficult to quantify the precise impact that a factor has had on the disturbingly high employment decline in Vermont, the most important factors appear to be:

■ Problems associated with the national recession and subsequent weak recovery— Since Vermont remains a part of the national economy, it is not immune to the inevitable ups and downs associated with the national business cycle. It is important to note that recent data revisions in the National Income Product Accounts have resulted in the national economic recession being somewhat longer and deeper than previously anticipated.

During recessions, long-term investment in capital equipment and expenditures on "larger-ticket" durable goods products and housing usually decline. That decline and the unusually slow recovery in these sectors during the current national business cycle has adversely affected Vermont's manufacturing sector, which has historically derived much of its strength from those capital goods and investment-oriented markets in the national economy.

■ The end of the national defense build-up--Although the Vermont economy is less dependent than the region on the military for output, job, and income growth, it should be noted that the state receives significant indirect economic benefits from a healthy defense industry in southern New England.

An estimated 25 percent of Vermont's tourists come from Massachusetts, Connecticut, and Rhode Island, the three states that comprise the southern New England region. It is estimated that tourists from those states represent as much as \$300 million in spending activity for the Vermont hospitality industry. Those estimates suggest that defense workers from that region make good vacation prospects for northern New England and Vermont. Taken together with their associated multiplier effects, it is not unreasonable to estimate that the direct and indirect economic impact of defense spending activity in Vermont could account for as much as 10 percent of the state's total annual economic activity.

- Maturation of the high-technology and computer industries--Like the New England region, Vermont has suffered from maturation of the computer industry. Today the leading components of "high-tech" demand are more closely aligned to firms located in Washington state, California, Japan, and the Pacific Rim. Intense foreign competition and changes within the computer industry have hurt job growth in that very important industrial sector across the New England region and in Vermont since its mid-1980s employment peak. Well-publicized, company-specific downsizing at leading high-tech employers in Vermont raises additional concerns about the long-term employment viability and growth prospects for this industry in the 1990s.
- **Problems in agriculture**--It is well known that Vermont's agricultural sector is heavily dependent on a healthy dairy industry for its vitality. Although in recent years it has diversified, more than three-quarters of agricultural receipts earned in the state are traditionally tied, either directly or indirectly, to operations in its dairy industry.

The dramatic decline in milk prices over the past two years has placed many Vermont dairy farms at considerable financial risk. Even the stronger farm operations that have the capacity to endure the negative impact of this price decline will likely suffer dramatic reductions in profitability.

That means the approximately 1,700 to 1,800 dairy-related business enterprises in Vermont, and the large network of businesses and other economic infrastructure that supports them, will experience similar declines in activity and profitability. This change, which appears mainly to be the result of federal agricultural and budget policies, will have a significant dampening effect on economic activity across Vermont, especially in some rural regions of the state where agricultural production and sales activity represent a significant portion of the local economy.

Loss of Vermont's and New England's cost competitiveness to domestic competition—Vermont's businesses today find themselves facing increasingly sharp cost competition from national and foreign concerns. Recent research shows that the entire New England region has suffered losses in cost competitiveness. This is supported by a study completed in 1990 by the Bank of Boston, which suggested that New England's vigorous growth in the late 1970s and early to mid-1980s helped push New England's wage rates⁵, home prices, health care costs, energy costs⁶, and workers' compensation costs up at rates significantly above the national average. Such cost increases ultimately resulted in a loss of cost competitiveness for many businesses in the region.

This loss of competitiveness has prompted numerous work-force reductions and costcutting initiatives among key employers across the region as companies in major industries strive to be more productive and therefore competitive in national and international markets.

Restructuring in financial services--Vermont's banking sector continues to be one of the strongest in the Northeast. However, the ongoing employment restructuring in the banking and financial services sector in Vermont has had a significant and negative impact on the Vermont economy as firms seek to reduce payroll and overhead costs in order to restore profitability.

It should also be noted that credit difficulties due to restrictive federal regulations and lack of sophistication in some Vermont credit markets may also be restraining job growth in non-financial enterprises such as manufacturing and construction.

⁵ It is important to note that with respect to wage rates, Vermont is guilty only by association. Wage rates for the New England region do in fact exceed the national average; however, in Vermont, wages are not higher than the national average.

⁶ Vermont is the only New England state that does not grant any tax concession for electrical energy and other fuels used in the manufacturing process. In fact, Vermont industrial users pay full rates and are subject to the state's sales and use tax for energy purchased and used in the production process.

The Difference Between Cyclical and Structural Change

The distinction between economic problems with cyclical or structural origins is critically important from a public policy perspective. Cyclical problems, and aspects of problems that are related to the business cycle, are for the most part self correcting during periods of recession and recovery. Examples of some of these cyclical factors that have made Vermont and the region less competitive include problems associated with the national recession and weak recovery and the competitive losses of the state and the region to domestic competition. In fact, some of these have already begun to correct themselves.

Structural economic problems, which include the other factors discussed above, are more problematic because they represent long-term changes that will not generally correct themselves. They reflect both the economy's existing industrial mix and the state's and the region's political and regulatory climate. Structural problems call for long-term adjustments and periods of transition because they require transformations in an economy before more typical rates of job and income growth can resume. These structural problems represent long-term handicaps to economic progress because they can become significant drags on cyclical rebounds in job and income growth.

Public policies and regulations that fail to recognize structural problems can needlessly extend the period of economic correction and the inevitable pain and suffering that accompany those adjustments. Vermont policy makers must recognize this and act accordingly so the Vermont recession and its period of long-term transition are made neither longer nor worse by improper or misguided public policy responses. Over the long run, all interested Vermonters and groups must reach agreement that environmental and social problems of the 1990s can only be addressed within the context of a healthy economy.

Recent Performance and Outlook for Vermont Industries

To understand the prospects for Vermont's economy in the 1990s and beyond, it is important to identify and then gauge the strength and competitive position of the Vermont economy's principal component parts. The following sections discuss, at a glance, the history, current situation, and growth prospects for key sectors of the Vermont economy.⁷

High-technology and computer industries

■ The state's high-tech industry has matured. Employment growth has peaked and this industry in Vermont is currently engaged in high-stakes foreign competition for its very survival.

 $^{^{7}}$ For the most part, these employment categories were selected based on the federal Standard Industrial Classifications or SIC codes.

- This industrial category, which still ranks as the state's largest factory sector and includes the state's largest private employer, generally responds to the national business cycle as it affects investment in business machinery--particularly in consumer electronics (e.g., computers). A general economic recovery in the United States would therefore be helpful to this sector.
- In Vermont, the industry is currently dominated by a relatively few large firms that are cutting payrolls and other costs in an attempt to effectively deal with a loss of competitive position.
- The emergence of a new breed of "new-tech" firms in Vermont and New England offers some hope that the period of decline in the state's largest factory sector may be easing.
- Public policies in this employment category should reflect a mix of strategies that: (1) assist existing major employers in their efforts to control their costs and (2) lay the groundwork for the development and expansion of the emerging "new-tech" firms.
- Public policies also should be designed to improve Vermont's higher education infrastructure, air transportation systems, and telecommunications network in order to assure that the "new-tech" companies have the tools to gain access to the markets they need to grow and prosper.
- It should be recognized that the full development of "new-tech" firms as a potential replacement for this sector's existing larger firms is still a number of years away.

The machine tools sector

- For the past decade, this sector of the Vermont economy has been in a decline despite a record U.S. economic expansion.
- Stiff foreign competition, collapsing oil prices, and reduced investments in durable goods industries, autos, and capital goods have hurt this industry in Vermont and reduced employment levels to less than half of the 1972 employment total.
- Although the period of rapid decline in the state's machine tool sector appears to be over, there is little optimism that this sector will repeat history and again rise in prominence to the peak employment levels of the early 1970s at least in part because of cost competitiveness problems.
- Policies that focus on what remains of this sector's highly skilled workforce could be designed to take advantage of potential niche-marketing opportunities in lower volume, price-insensitive products, as well as other potential opportunities as the backward economies of Eastern Europe re-tool.

Although policy makers will need to be sensitive to this sector's long history of labor-management conflict, another potential economic development strategy would be to encourage the establishment of "incubator" facilities. The primary benefit of such incubators would be to promote small spin-offs in this troubled industrial category.

Resource-based processing industries

- In a traditional sense, Vermont cannot be considered a state with a rich endowment of natural resources. However, the state does receive an important economic contribution from production activities associated with the state's lumber and wood, furniture, and granite industries in many geographic regions across the state.
- Although some parts of these industries in Vermont are improving relative to the employment lows of the 1989-92 recession, they have been in a long-term employment decline. Steps designed to cut costs and enhance productivity have prevailed in recent years among major employers in this industrial category.
- State policy makers could assist job and income growth in these sectors by implementing regulatory reforms and other cost-saving strategies that would reduce the financial need to undertake additional steps to cut payroll and other costs.
- Another potential and complementary public policy strategy would be to implement measures designed to cultivate the emerging "crafts" industry in Vermont, which has become more prominent in recent years as the state's tourism sector has grown.

The consumer products sector

- Because of its extreme northeastern location, Vermont will not become a major manufacturer of price-sensitive consumer products. Several Vermont firms have, however, been extraordinarily successful in developing premium-priced specialty or niche-oriented markets for Vermont-made products (e.g., Ben & Jerry's Homemade, International Cheese Company, Rhino Foods, St. Albans Cooperative Creamery, etc.). As one of the few growing manufacturing categories, the continued success of firms in this category is vitally important to the future of the Vermont economy.
- The key to prosperity in this group of industries appears to be based upon: (1) an ability to serve local market outlets more efficiently than out-of-state competitors, and/or (2) an ability to capitalize on the favorable market perception of Vermont-made products for sale in premium, out-of-state markets, and/or (3) an ability to provide products to the market that can command a higher price because of their unique nature, premium quality, or superior craftsmanship.
- At a minimum, public policies designed to facilitate and expand upon the nichemarketing successes of these firms (e.g., Market Vermont) should be continued.

- Policies could be designed to help Vermont firms tap into new markets for Vermont-made products, for example to encourage the expansion of direct marketing strategies.
- Although this industry conglomerate includes some of the lowest skilled, lowest paying sectors of the Vermont economy, it also represents some of the best and most natural opportunities for increasing the value of raw materials through processing and manufacturing, which is referred to as "value-added."
- Policies designed to take advantage of employment growth opportunities in this sector should recognize that many firms in this category offer non-traditional forms of employee compensation such as employee-ownership. Thus, rates of return from a policy perspective must be evaluated in this context.

The defense sector

- Throughout the 1980s, the New England and Vermont economies were disproportionate beneficiaries of the "Reagan defense build-up," which emphasized the procurement of strategic weaponry.
- The political disintegration of the Soviet Union and subsequent end of the military build-up has seriously curtailed manufacturing activity and employment growth in several durable goods factory categories in the Vermont and New England economies.
- The Vermont economy, although it is proportionally less dependent on direct contracting activities from the Department of Defense than other New England states, benefitted directly from defense contracting and production activities and indirectly from more healthy levels of tourism activity by New England residents who traveled to Vermont.
- Our nation's history of "hot and cold" defense spending, and the tenuous geo-political situation in Middle East and Eastern Europe and among some members of the Commonwealth of Independent States, suggest that it is far too early to "write-off" the 1990s for this industry.
- Although the economic future of this sector is largely determined by forces that are beyond Vermont's direct control, state public policies should support existing defense industries in the state, with special emphasis on those parts of the defense industry, for example core technologies, that are still expected to grow in the post-Cold War era.
- Beyond those policies, state government can also do much to facilitate the transition and down-sizing in other defense-related production activities.

The construction industry

- During the late 1980s, speculative pressures and the after-glow of the "Massachusetts Miracle" mentality made Vermont's construction industry one of the key sectors underpinning strong rates of job and income growth.
- As an economic sector that typically derives its strength from job and income growth in other areas of the economy, this "leading" role proved to be unsustainable and it ceased in the spring of 1989. Since that time, Vermont's construction sector has lost nearly one of every two of its jobs--the worst job loss performance of all of the New England states.
- The overall outlook for this sector in Vermont is one of gradual recovery as general economic conditions in the state slowly improve through the 1990s and the excessive inventories of existing commercial space and housing stock are reduced.
- The state would best serve this sector by taking steps to: (1) maximize the use of all federal and state funds for infrastructure projects, and (2) encourage a supportive environment for job and income growth.
- Over the long term, policies should be implemented to remove unnecessary obstacles and costs from the state's growth management and other regulatory processes.

Finance, insurance, and real estate

- The economic fortunes of this previously high-performing sector of the Vermont economy have taken a dramatic turn for the worst over the last three years.
- Although employment losses in this category appear to be abating, on-going employment consolidations in the state's banking and real estate sectors are restraining job creation and income growth in the Vermont economy through significant workforce reductions.
- These long-term employment adjustments are expected to continue over at least the near term.
- Like the construction sector, this employment category derives most of its strength from a healthy and growing economy. As such, policy makers would best serve this sector by taking steps to encourage job and income growth in the Vermont economy over the long term.
- Policies should be designed to remove unnecessary obstacles and costs from the state's regulatory process.

To the extent possible, policy makers should also explore strategies to help assure that affordable supplies of credit for business are available to help struggling businesses recover from the economic downturn that prevails today.

Services

- Services represent one of the fastest growing industrial categories in Vermont and for the nation as a whole. This sector is a complex collection of industries that serve a combination of local, regional, and national sources of demand.
- The growth of the information age, aging baby-boomers (who will eventually require proportionally more health care services), and the growing emphasis on education and flexible skills training for the workforce suggest that this sector will continue to grow.
- The overwhelming majority of jobs in this area appear to serve local demand, and the recent weakness in Vermont's manufacturing and goods-producing sectors suggests that the best way to encourage employment growth in services is to implement policies that will assure a strong state and regional goods-producing economy.
- The implementation of policies supportive of Vermont's capability for exporting professional services (such as information services and health care) beyond its borders also offers a sound opportunity.
- Such a supportive policy would require the improvement of Vermont's existing telecommunications infrastructure to take better advantage of emerging opportunities in telemarketing and various activities in both the non-traditional and emerging financial services categories.

Government

- After several decades as a major source of job growth, mounting fiscal problems resulting from the recent economic downturn have finally started to affect employment levels in Vermont's governmental sector.
- A downsizing is underway that will likely continue for most of the 1990s in Vermont, despite the fact that local governments are struggling under the pressure of unfunded state and federal mandates, the need to enhance education, and an increasing need to hire professionals to handle a growing number of complex tasks.
- Although this downsizing trend may be appropriate and desirable over the long term, the short-term effects of reducing expenditures and employment will provide an additional drag on the performance of the Vermont economy until the more subtle, long-term benefits of a smaller public sector work their way through the economy.

- The most effective strategy for dealing with the economic impacts of the public sector's expected employment retrenchment would involve programs designed to help displaced workers re-enter the state workforce.
- An equally important part of this public policy effort should include measures such as: (1) strategies designed to improve the linkages between Vermont higher education infrastructure and the economy, and (2) mandatory cost-benefit analysis, perhaps including "privatization" strategies, for all new government programs and regulations. The second would be very helpful in preventing the unwise growth of the public sector in Vermont that necessitated the employment cutbacks in the first place.

Travel and tourism

- The state's hospitality industry, which epitomizes the type of synergy that can exist between a clean environment and business, is becoming an increasingly important part of Vermont's economy.
- Improvements in important aspects of the tourism infrastructure, the "second" home business, and the implementation of more effective marketing programs have generally underpinned the historically strong job and income growth in this sector during the mid- to late 1980s.
- The growing friction between representatives of the travel and tourism industry and environmental groups needs to be resolved if the future of this important industry is to remain bright.
- Policies designed to improve and better coordinate advertising and promotional activities by both public and private entities should be implemented if the state's travel and tourism industry is to take full advantage of the exceptional short- and long-term opportunities.

Agriculture

- Although agriculture has historically been an important goods-producing sector of the Vermont economy, it has been in decline for many years due to productivity gains and a loss of competitiveness in its dominant dairy sector with larger farms in the Midwest and West.
- This industry has traditionally experienced cycles of "boom and bust," which may or may not coincide with the general business cycle. The current "bust" cycle in Vermont agriculture comes at an inopportune time: it follows an exceptionally short "boom" period in the dairy sector, which failed to adequately strengthen the financial position of many farmers to weather the current situation.

- Vermont will likely always have a critical mass of agricultural production to serve niche-oriented specialty food markets that can utilize the market advantages of Vermont's pristine and wholesome reputation.
- The agricultural industry in Vermont will remain in transition for at least the near future. As such, policies designed to both promote greater efficiency and ease the burdens of transition would be helpful in improving Vermont's relative economic performance.
- It is also important for Vermont policy makers to take steps to maintain a critical milk production mass and continue Vermont agriculture on a path toward greater diversification. Such steps are important, if for no other reason than to preserve the close linkages agriculture has to the continued success of the state's travel and tourism industry.

Higher education

- The enhancement of Vermont's network of public and private higher education institutions is critically important for Vermont's future economic success.
- Vermont's higher education institutions play vital roles in activities ranging from technology transfer to increasing the skills level and adaptability of Vermont's workforce. The performance of this sector is very important to Vermont's future competitiveness.
- Higher education institutions are major employers in Vermont and make important contributions to the vitality of their local and regional economies. Many are significant exporters of educational services, which import substantial sums of money into the state.
- Public policies should be designed to strengthen the state's existing higher education infrastructure from the standpoint of: (1) increasing the capability of Vermont's higher education institutions to successfully compete for students in regional, national, and international markets; (2) workforce education and training; and (3) increased applied research activities and improved technology transfer.

PART II THE COMPETITIVE ADVANTAGES AND DISADVANTAGES OF VERMONT'S ECONOMY

Introduction

Vermont's current economic condition--and interest in what can *constructively* be done to address our fundamental problems--has led to increased concern about how our state compares with its competitors. Does Vermont measure up economically with other states? What can really be done as we seek to maintain and nurture our existing employment base against the overtures of other states and local development groups around the country? Is our state attractive enough to convince businesses in other areas to expand their operations to Vermont? Are we properly equipped to entice businesses to relocate to the Green Mountain state?

There are no simple answers to these questions. Often what makes a state or region "attractive" to a specific company or a particular industry is driven by a relatively small group of special factors or by local concerns. As such, more general assessments of "business climate" are not particularly indicative of how competitive a state or region really is.

Moreover, much of what constitutes a state's or region's attractiveness to business is either very difficult to objectively verify or involves some form of subjective judgment on the part of the researcher or investigator. In short, one party's competitive advantage could very well be another's disadvantage.

The other major difficulty in assessing competitiveness is the fact that "attractiveness" is a moving target, a constantly changing, dynamic phenomenon. Changes in a state's relative business cost competitiveness, its economic performance, its public policy and regulatory climate, and its tax structure and burden can occur over a relatively short period. This is especially true during economically troubled times.

Therefore, this study does not attempt to render an abstract judgment of how friendly the state of Vermont is to business. Instead, it attempts to identify some key criteria and factors that (1) business people may use in evaluating the viability of operating their businesses in Vermont and (2) public officials may use in evaluating the potential economic impact of policy and legislative initiatives. While these factors primarily involve cost data and indicators associated with the use of Vermont's land, labor, and capital, measures such as the "quality of life" indicators are also included.

These comparative cost structures represent the new reality of today's increasingly integrated, global economy. Vermonters need to recognize that the security of their jobs depends to a great degree on the ability of Vermont businesses to compete with companies that just a few years ago were considered too far away to pose a competitive threat.

If Vermont's cost of doing business is out of line with that of other areas, the prices that Vermont concerns must charge for their products and services will be placed at a competitive disadvantage unless customers recognize additional value to offset the Vermont product's higher price. If enough sales at Vermont companies are lost due to a lack of cost competitiveness, job losses will soon follow. Vermont's quality of life will be diminished because of reduced employment opportunities, and the state's ability to protect its environment and social infrastructure will likewise be imperiled.

The Roundtable has undertaken this assessment of the state's competitive economic advantages and disadvantages on behalf of all individuals and groups who are concerned about the Vermont economy and how Vermont can be a viable economic competitor—in the region, the nation, and the world.

Competitive Advantages

The first section of this assessment focuses on seven competitive advantages that Vermont enjoys. The order of their presentation is not intended to convey a relative degree of importance in Vermont's overall economic picture.

Vermont's workforce: Our human capital resource

It is often said that Vermont's hard-working, productive workforce is perhaps its greatest asset. As part of the New England region, which is known for "working with our wits," the maintenance of a competitive edge in workforce quality and productivity is essential to Vermont's economic survival.

Table 3 (see Appendix) shows that Vermont does indeed compare very favorably in five of the eight identified *workforce quality* indicators. Our state appears to have a distinct advantage in educational attainment and in some measures of direct cost. At the same time, it is important to note that Vermont ranks less favorably from a competitive standpoint in several areas of workforce cost.

The growing complexity of the workplace and the increasing mobility of workers require that Vermont's workforce have the skills to compete in the emerging global economy. These indicators suggest that Vermont's well-educated and generally affordable labor force have put the state in a position to compete effectively during the 1990s and beyond. In addition, Vermont is currently attempting to address the primary threats to its long-term workforce competitiveness by reforming the state's Workers' Compensation Law and by emphasizing the improvement of its public education system.

Banking situation and conditions

Throughout the current New England economic recession, a key reason for Vermont's comparatively stronger economic performance has been the continued relative strength of Vermont's banking system (see Table 4 in the Appendix). As the banking systems of several other states in the region were undergoing difficult adjustments, the Vermont banking system experienced comparatively few problems. Even at their worst, most of Vermont's problems to date have resulted in little disruption and few major dislocations, and credit availability has generally not been seriously harmed in most areas of the state. That represents a significant advantage for Vermont versus the other states in the region and nation.

This comparatively better Vermont banking performance during the current regional economic downturn can be attributed to many factors, ranging from a strong industrial mix and a culture of conservative, community lending practices, to geographic location (which helped reduce speculative pressures in real estate). Not surprisingly, these same factors have also been helpful in maintaining a superior macroeconomic performance for Vermont.

Vermont's northern location has been helpful in allowing the state to escape many of the speculative real estate pressures that were most acute in southern New England and the greater Boston metropolitan area. While the Vermont economy and banking sector were not able to avoid all of the negative effects of New England's real estate boom and subsequent collapse, the negative effects here generally involve the second-home market (i.e., around the state's resort areas), and some other locations around the state primarily in the commercial real estate sector.

A final major factor in the banking sector's relatively stronger showing during the recession relates to the different structure of the state's high-tech or computer industry compared to the other New England states. In Vermont, the state's major high-tech employer (International Business Machines) serves markets that appear to be sensitive to the national business cycle (i.e., their markets are driven mainly by businesses' purchases of capital equipment items such as computers). Therefore, the Vermont high-tech sector is proportionally less dependent on complementary and sustained increases in defense contracting activity than other New England states (such as Massachusetts and Connecticut) where a primary outlet for high-tech output is defense end products.

This structure suggests that Vermont's high-tech companies are better positioned in the market to benefit from any significant national economic recovery than the high-tech industrial bases of the other New England states. Once this general economic recovery gets underway, the Vermont banking sector will be well positioned to respond to and fulfill the credit needs of the Vermont recovery.

Quality of life

Of all the factors affecting Vermont's relative attractiveness to business, the one most frequently mentioned as a competitive "advantage" for the state is Vermont's "quality of life." Quality of life means many things to different groups and individuals, including a low crime rate, relatively good economic circumstances and lower than average poverty rates, more physicians per 100,000 of population, and/or a cleaner environment (see Table 5 in the Appendix).

"Quality of life" is an inherently subjective concept that does not lend itself to comparative measurement or rankings that arise out of empirical research. Although quality of life is subjective, several of the major business climate studies rank Vermont's overall quality of life in a number of ways.

For example, a 1990 business climate study by the Southern Regional Council ranked Vermont third highest among the 50 states in quality of life. The latest Green Index gave Vermont a composite ranking of 12th among the 50 states on a scale for "Fun and Quality of Life," and in 1991 the Corporation for Enterprise Development Studies ranked Vermont at or near the top of states in several quality of life factors.

However defined, the concept of quality of life will most likely continue to be an important competitive advantage for Vermont. Whether or not the state maintains a "highly ranked" quality of life will depend primarily on the ability of Vermonters to balance the protection of Vermont's precious natural resources with the need to provide fulfilling, high-quality, well-paid job opportunities. The two priorities are dependent upon one another and it will be difficult to effectively accomplish one without the other.

Proximity to Canada

Although Vermont's extreme northeastern U.S. location is not considered a competitive strength in a conventional economic sense, Vermont's proximity to Canada--and to Montreal in particular--allows the state to benefit from export and business relocation opportunities coming from Canada. This potential is enhanced by the successful negotiation and approval of the U.S.-Canadian Free Trade Agreement. Currently in its third year of implementation, this agreement has been widely acknowledged as benefiting both countries.

More recently, potential export opportunities were expanded further through the negotiation of yet another trade agreement—the North American Free Trade Agreement, negotiated with Canada and Mexico. Even though this agreement has not yet been ratified, its implementation is expected to be, on balance, beneficial to all three countries.

While possibilities of expanding our small (\$18 million) annual trade activity with Mexico are alluring, opportunities to expand upon our already existing \$2 billion in economic ties to Canada appear to be the most promising for the next five years. With the full elimination of

trade barriers (which will take a number of years and assumes, of course, that the agreement will be ratified by all three countries), the North American Free Trade Agreement may also afford Vermont businesses opportunities for shipment of goods through the Port of Montreal to other parts of the world.

In addition, Vermont's location also permits business expansion and relocation opportunities by Canadian concerns seeking greater access to consumer markets in the northeast corridor, but desiring to remain somewhat close to "home." Although competition for such relocations remains intense, especially with northern New York state, Vermont should capture at least some of these businesses seeking relief from what they view as unfavorable economic policies on the part of the federal government of Canada.

Given the erosion in Vermont's factory job base, this type of export potential may offer the best way for the state to stabilize its local manufacturing base in the future. However, the outlook for accessing global markets through Canada and taking advantage of Canadian opportunities does carry some risk. The recent parliamentary crisis in Canada serves as a reminder that relying on foreign trade for a substantial portion of Vermont's output of goods and services is inherently more unstable, both politically (for Canada) and due to fluctuations in the value of U.S. currency, than relying more heavily on domestic markets.

Capitalizing on Vermont's "good" name

Another competitive advantage for Vermont is marketing Vermont's favorable image locally and out of state to command a premium price for Vermont-made products. Perhaps the best example of an industry successfully seizing this marketing advantage is Vermont's growing specialty food sector.

Niche-marketing success stories abound; the industry has grown so that today there are an estimated 250 Vermont-based specialty food companies producing roughly 1,800 different food products, many of which use only Vermont ingredients. Farming operations have successfully found market niches in operations ranging from raising trout to producing goat's cheese.

However, it should be recognized that the "Vermont-made" approach may have only limited short-term applicability in some categories of industrial activities. For example, favorable images of made-in-Vermont jet fuel gauges, automobiles, or other transportation-cost-sensitive products may require longer periods of market building and image cultivation than they would for other areas that are located closer to the nation's population centers.

For the most part, marketing strategies playing on the "Made in Vermont" mystique have historically been applied to the shorter-term opportunities associated with small-ticket consumer products, though there are exceptions. Unfortunately, these consumer products industries also tend to be among the lower paying of the state's major industrial sectors. As such, Vermont's mystique may have a somewhat narrower potential impact than is generally believed.

Accessible government

Although it represents yet another intangible factor, a competitive advantage for Vermont is the accessibility of state and local government organizations. No feature better epitomizes this than our state's part-time, citizens' legislature. Unlike the public sectors in other states, Vermont's appears to function better--at least on the surface--than the legislatures and executive offices in most states, especially those with full-time legislatures.

As an example, the prompt passage by the Vermont Legislature of supportive statutes regarding captive insurance illustrates how the state's government can be proactive to Vermont's advantage. First passed in 1981, this legislation has enabled a total of 245 captive insurance companies to set up operations and conduct business in Vermont. These companies' activities have created an estimated 150 private sector jobs and are responsible for approximately \$250 million in deposits at Vermont banks. In addition, these companies will pay an estimated \$9 million in insurance premium taxes to the state this year, up considerably from the \$250,000 they paid in 1986.

Small business and entrepreneurial inclination

Small business embodies the American and Vermont entrepreneurial spirit. Using the flexibility and adaptability that comes with "being small," these companies are generally better able to meet market challenges and carve out their particular niches in an age of increasingly rapid change.

During the 1980s, small businesses in the U.S. economy grew as the larger Fortune 500 companies actually started to lose employment. The small business job generation machine became the nation's primary force for job creation, adding an estimated 12 million of the 18.5 million jobs created by the U.S. economy during the 1980s.

Vermont is a state of small business. The state has nearly twice the national average of self-employed individuals, with 94.4 percent of its businesses falling into the Small Business Administration's definition of a small business. Vermont is ranked second in the nation in the percentage of its total business establishments employing fewer than 500 people.

This economic structure is thought to be an advantage for the Vermont economy from the standpoint of adaptability, flexibility, and entrepreneurship. This perception is supported by the major corporate restructuring that has been underway for more than a decade in the U.S. economy, and the fact that most of the "net" job growth in the U.S. economy during the 1980s came from small businesses rather than larger companies.

Competitive "Swing" Factors

Some factors have had, and are likely to continue to have, a major impact on the relative health and performance of the Vermont economy. Yet these factors are different from the

competitive advantages listed above and the disadvantages listed below; they are "neutral" or "mixed" from a competitive standpoint.

While public policies in Vermont should continue to nurture Vermont's competitive advantages, these "swing" factors present a critical group of competitive forces that could either help or hinder the state's economic performance over the next decade. They represent a significant opportunity for policy makers to improve Vermont's relative competitiveness. The implementation of effective public policies designed to nurture the present strengths and address the current shortcomings related to these factors could yield significant economic rewards over the next several years.

<u>Infrastructure</u>

Infrastructure is a very broad and complex topic. It encompasses a wide range of issues that could influence the location decisions of businesses and households and therefore affect the level of economic activity and job creation in a state or regional economy.

For example, good roads, adequate wastewater capacity, quality schools, and a sufficient number of health care providers could be expected to help encourage migration into an area. From a business perspective, a firm engaged in distribution functions would consider a good transportation system vital to business.

Although empirical research is not completely conclusive, it appears that investment in public infrastructure can have a positive impact on economic activity and job creation. While research does not clearly establish whether the accelerated economic activity or the increased infrastructure investment comes first, it appears that expanded public investment to help alleviate serious safety hazards and to improve Vermont's quality of life does enhance productivity and economic growth.

Vermont is in the middle of the pack when it comes to the condition of its existing network of roads and bridges. Meanwhile, the state appears to be somewhat lacking and perhaps even losing ground in several major infrastructure areas (e.g., lack of major east-west roads and higher than average wastewater treatment needs), which put the state's businesses at a competitive disadvantage (see Table 6 in the Appendix).

Road deficiencies are particularly troubling for the Vermont economy, since much of the state's economic activity is dependent on input and product shipments that travel over its network of highways and roads (including 320 miles of interstate routes, 2,500 miles of toll-free highways, and 11,000 miles of supporting roads). Therefore, special attention is needed to maintain and improve the condition and the quality of the state's road network so Vermont's rural character does not work against it in the competitive marketplace.

Telecommunications

With its high concentration of technology-based and communications-oriented businesses, Vermont needs a high-quality, technologically advanced telecommunications network to be competitive. Such a system would ideally include a communications system that would reduce the importance of geographic location as a workplace requirement.

Vermont is fortunate that state regulators and private utilities recognized the value of such a system back in the mid-1980s. Because of this foresight, Vermont today enjoys a state-of-the-art fiber optics communications network.

Vermont's advantage in this area may be beginning to erode; the satisfactory resolution of the current debate about Vermont's ten-year communications plan and the redoubling of the state's major telecommunications company's effort to complete this system will be necessary to maintain Vermont's competitive edge. Failure to resolve these issues may result in a loss of the state's current competitive edge in this increasingly important infrastructure area in the emerging information age.

Higher education

Vermont is a state with few natural resources. It is located far from key growth markets in the southern and western regions of the United States, has long and cold winters, and must deal with the competitive burden of higher than average energy costs.

One way the New England region has been able to overcome similar handicaps and succeed in the national and global market place is by doing a better job of applying technology and knowledge to the production process. This success has been aided by the region's network of quality colleges, universities, and non-profit research institutes, which have been responsible for: (1) training a capable, quality workforce and (2) attracting some of the best scientific and engineering talent in the country. New England's research base is often referred to as its "crown jewel," and in 1988 the region received a disproportionally large 14 percent share of government-sponsored research funds for the year.

While it was noted in the discussion of Vermont's competitive advantages that the state appears to score well in workforce education and training, it should be acknowledged that the maintenance of this advantage is in no way assured, and that the state fares poorly in facilitating research and technology transfer. In fact, according to the Corporation for Enterprise's Development business climate study, Vermont ranks very low in its research and technology transfer infrastructure, having received a grade of "D." This low ranking reflects a lack of resources for conducting applied research and providing information on new technologies and a lack of guidance in applying new technologies in the private sector. Because other countries and several other states (especially in New England) have substantial technology application resources, Vermont businesses often operate at a competitive disadvantage when they are forced to respond to rapid change.

A common vehicle for facilitating technology transfer is the establishment of research and development centers associated with colleges and universities. These typically work with the local business community, focusing on specific technologies in which a state is believed to have a competitive advantage.

As the technologies are developed and commercialized, they become a stimulus for economic growth as entrepreneurs establish new businesses and existing businesses spin off new companies. Because businesses are primary beneficiaries of university research and development centers, they are frequently major financial backers of research projects. For this reason, investment by state government in these centers can attract substantial investment from the private sector, and can provide an excellent long-term return in improved economic competitiveness and eventual increased tax revenues.

A program to foster a quality infrastructure in higher education is important both for assuring that the state has a competitive workforce and for providing a mechanism to encourage technology transfers for the acquisition and assimilation of new, more productive technologies into production and management systems. Both are critical if we are to remain competitive and control the costs of doing business as we compete in the global economy.

Travel and tourism

A final area of infrastructure critically important to the performance of the Vermont economy is the maintenance and improvement of the state's travel and tourism industry. Even though the state already has high-quality destination-oriented resorts, we cannot afford to ignore the need to at least maintain the current conditions of our roads and bridges and explore strategies for improving the state's air transportation network. One improvement in this area would be to enhance the quality of existing east-west state roads and highways. Another option would be to examine the viability of expanding existing air carrier service to include flights to the province of Ontario.

Regulation

A second important competitive "swing" factor is the administration of regulations in the state. From a competitive standpoint, the real issue of regulation, whether it involves environmental rules, labor relations, or access to health care, is how the existence and enforcement of these regulations affect the costs of doing business in the state compared with the cost of conducting business in other states and in other countries around the world.

Whether or not it is deserved, Vermont has developed a reputation for being a difficult place to conduct and expand a business enterprise. In fact, the entire New England region (with the possible exception of New Hampshire), with its relatively high energy costs, escalating workers' compensation premiums, relatively expensive health care, and above average housing costs has developed a business cost structure that is unfriendly toward economic growth.

Vermont policy makers need to examine the state's current regulatory policies and evaluate whether there are unnecessary time delays or inconsistencies in enforcement. Government should question the need for regulations where the environmental and social benefits of maintaining them are exceeded by the higher costs those regulations impose on all Vermonters.

At the present time, Vermont public officials are engaged in two important regulatory policy debates that will have a far-reaching impact on the capacity of our state's businesses to effectively compete in the global economy over coming decades. These issues involve access to health care and how the state is going to improve the administration of its permitting process for economic development. It should be acknowledged that reform efforts are underway in areas such as workers' compensation as well.

Government, business, and various interest groups need to come together to resolve these important regulatory issues. Without a growing economy, there is no regulatory policy or governmental fiat that can guarantee Vermonters access to affordable health care. There similarly can be no set of regulations or group of government programs that can guarantee either a quality environment or adequate social safety net. Facilitating the growth of quality, high-paying jobs is a key part of that strategy; it represents the only real option for preserving--indeed enhancing--Vermont's environmental "crown jewel" and the legacy of its humane social safety net.

Corporate Code

As the state of Vermont moves toward the twenty-first century, its business community must organize itself and operate within the boundaries and parameters of a commercial code that was originally written in the late 1950s. Although the lack of a modern commercial code affects business in sometimes subtle ways, it is generally viewed as having placed Vermont businesses at an operational disadvantage versus business operations in other states with more modern, uniform, and consistent corporate codes.

Vermont policy makers should undertake a thorough examination and revision of the state's corporate code to address competitive inequities. The result should be a code that is more predictable and understandable for businesses currently in Vermont and for those contemplating business location and/or investment in the state. This corrective action should place Vermont business on an even playing field with those businesses in other states that represent Vermont's primary competitors.

Competitive Disadvantages

The final discussion of competitive factors concerns those economic performance determinants that are likely to continue to be negative from a relative competitiveness standpoint. This section includes five identified competitive disadvantages, which have varying potential to be addressed by public policy over the short or intermediate term.

Geographic location

Vermont, being located in the extreme northeastern area of the United States, is far from the growing markets of the South and the West. This, in combination with the fact that all products and production inputs must generally travel by truck, means that Vermont may never become a major production center for generic, low-value-added manufactured products that must compete on the basis of price.

In fact, the industrial history of Vermont and the entire New England region reflects the innovation and birth, maturation, and then loss of industrial sectors to lower cost areas of the United States and points abroad. This model has been followed on a somewhat consistent basis throughout the twentieth century, whether the sector is textiles and apparel or the computer industry of today.

There appears to be little that public policy makers can do to specifically address this locational drawback, though policies could be implemented to help reduce the associated business cost implications. However, the success of such strategies in off-setting this disadvantage is likely to be limited at best.

Energy costs

Because of its heavy reliance on fuel oils, Vermont industry is handicapped with above average energy costs that negatively affect its competitive position. The extent of this disadvantage is illustrated in a 1990 Grant-Thornton manufacturing business climate study, which ranked Vermont among the least competitive states in the nation with respect to energy costs, especially the cost of electric power.

Other things being equal, energy costs affect economic competitiveness because they represent a significant share of business costs, and because cost differences between regions in close proximity can be substantial.

Fortunately for Vermont, all nearby states are burdened with similarly high energy costs when compared to other regions of the United States. So while energy costs may not be a determining factor when competing with other New England states, Vermont is at a distinct disadvantage in competing with low-energy-cost states in other areas of the country.

To attract new businesses and retain existing firms, scores of private and public utilities around the country have created an astounding array of economic development programs. They recognize that helping improve economic competitiveness translates into a healthy service area with a more stable economy, which benefits both the utility and the community. Typical programs include: (1) discounted economic development incentive rates and reduced economic recovery rates during recessions; (2) community development assistance and programs; (3) financial support for and cooperation with other private and public organizations involved in economic development; and (4) site selection data centers for corporate site planners.

While the state's major utilities have recently begun to move in this direction, Vermont needs to examine the efficacy of several energy cost reducing policies, including: (1) a moratorium on the five percent energy sales and use tax to new and expanding businesses; (2) continued support for energy efficiency; and (3) support for finding long-term, least-cost energy supplies through vehicles such as co-generation and independent power production.

Although it should be recognized that Vermont has only a limited ability to address how its geographic location and rural character raise energy costs, the state should address issues that may needlessly increase energy costs. At a minimum, Vermont regulatory policies should always consider how the enforcement of regulations may affect Vermont's energy cost competitiveness.

Lack of industrial diversity

It is well documented that Vermont is heavily dependent on a relatively few industries and large employers for its economic vitality. This means the state's economic and employment base is vulnerable to developments in a relatively small number of industrial categories and activities.

If one or more of Vermont's major industries is experiencing problems particular to its sector (i.e., computers, financial services, defense), it is often very difficult for other sectors to completely fill that employment growth void. The entire regional or state economy can be affected, creating and/or exacerbating the social problems that often are the result of this economic under-performance.

Public policies can be designed to diversify the state's employment base both regionally and on a statewide basis. However, the public policy process requires considerable lead time. In addition, the re-tooling of an industrial sector is a long-term endeavor, and cannot generally be accomplished in less than five to ten years.

Tax burden and tax rate levels

The fiscal policy activities of government can have a profound impact on a state's competitive position. An efficient and effectively run public sector can help reduce the financial burdens government places on the private sector.

If these needs are met more efficiently in Vermont than in other states, taxes can generally be held to a lower level than in competitor states. This can help create a more competitive business cost environment for a state's businesses.

An examination of fiscal burden data in Table 7 (see Appendix) reveals the following trends:

■ Vermont's state and local tax, expenditure, and public employment cost burdens remain high in relation to national average.

- Vermont's state and local tax, expenditure, and public employment cost burdens are increasing.
- Vermont generally spends more on education, highways, and public welfare than the national average.
- Vermont relies more heavily on its income and property taxes than the national average, and less than the national average on sales and gross receipts taxes.

Various fiscal burden indicators through fiscal year 1990 fail to recognize significant tax and spending actions in Vermont and other states that may have been undertaken in subsequent years to resolve their fiscal problems. In particular, none of the burden statistics for Vermont include the following 1991 tax actions: (1) the imposition of the tiered tax rate structure in Vermont's personal income; (2) the rate increase and base broadening initiative in the sales tax; (3) the increase in the corporate income tax, and (4) the increase in the meals and rooms tax rate.

Whether or not these changes, when reflected in Vermont's tax burden indicators, will affect the competitive business climate of Vermont is unclear. While business location and expansion decisions rely on other factors besides tax rates and structure, tax increases of this magnitude could have an unusually large impact on the relative cost of operating a business in Vermont.

It should be recognized that business taxes represent a significant portion of business costs which, over time, will have to be reflected in the prices paid by customers buying Vermont products and services. Extra scrutiny needs to be given to public sector budgets to assure that they are as lean as possible, while still maintaining adequate levels of service and not impeding job creation.

In the area of state fiscal policy, this can best be accomplished by eliminating competitively punitive tax policies and by making investments in budget areas and programs that better prepare us for the challenges of the future. This requires a two-pronged approach: (1) imposing a new level of fiscal discipline in public expenditures and (2) eliminating business taxes that are not competitive with other states and our growing number of new worldwide competitors.

Availability of affordable capital

A final area of competitive concern for the Vermont economy is the relative availability of affordable capital. This indicator sends an important signal to would-be business persons and entrepreneurs: with access to capital, their ideas can become reality. It also sends the message to existing businesses that their companies will have the financial resources to expand to meet increasing demand.

Given the current economic climate in New England, it is important that Vermont companies acquire the "new" capital they need to finance additions to existing capacity and to accommodate new businesses in the state. However, it must be acknowledged that concern about "capital gaps"--the perceived lack of availability of funds for start-ups and expansions--may sometimes result from a business's inability to secure credit rather than the lack of available, affordable capital.

Vermont's banking and financial sector is currently undergoing a process of restructuring. This realignment, while it is somewhat less severe than that which occurred in many other states around the nation and in the New England region, is creating a difficult lending environment especially for certain types of Vermont businesses.

Public policy makers in Vermont must take steps to avoid seeing a repeat of the recession-extending experience in Texas during the mid-1980s, where acute capital shortages at the critical point in its recovery process needlessly prolonged that state's recession. While it should be recognized that federal regulatory policy is the dominant force at play in this area, and that those policies are largely determined in Washington, assistance can be provided on the state level to meet financing gaps (i.e., V.I.D.A. and expanded use of SBA guarantees and Small Business Investment Corporations) and can help assure the availability of adequate and affordable capital to Vermont businesses that need it.

CONCLUSION

In presenting the results of these two Vermont Business Roundtable studies--an evaluation of the performance of Vermont's economy and an assessment of our competitive status--we have tried to provide information that can help Vermonters assess the state's current economic situation in light of past performance and future expectations. We believe that it is imperative that Vermonters understand all these aspects of Vermont's dynamic economy if we are to come up with viable new strategies for preparing our state to be economically vital and competitive in the twenty-first century.

APPENDIX

Table 1

Total Nonfarm Employment by Industrial Category 1972-1991

Total Nonfarm Employment:	1972	1985	1992*	Change 1972-93	Change in Jobs 1972-92 1985-92	% Chang 1972-92	% Change in Jobs 1972-92 1985-92	Average "Covered"** Wage (1990)
lates	(3,0/2	97,519	108,457	34,782	10,938	47.21%	11.22%	Z.A.
Vermont 15:	153.6	225.3	245.0	91.4	19.7	59.47%	8.75%	\$20,531
Vermont (by category)								
Mining	8.0	0.5	0.5	-0.3	0.0	-37.50%	%00.0	\$23.868
	10.4	13.8	9.3	-1.2	4.6	-11.06%	-32.97%	\$21.920
turing	41.6	49.9	42.8	1.3	-7.1	3.01%	-14.23%	\$28,187
	27.6	35.5	29.0	1.4	-6.5	5.01%	-18.24%	\$30,859
	3.1	3.7	3.3	0.2	-0.4	6.71%	-10.59%	\$19,001
	2.6	2.1	1.9	9.0-	-0.2	-23.84%	-7.52%	\$18,767
Glass	2.7	2.3	2.2	4.0-	-0.1	-16.68%	-4.00%	\$26,752
	0.6	8.4	4.2	-4.7	-0.5	-52.98%	-11.41%	\$26,551
als/Computers	9.3	16.9	12.0	2.7	-4.9	28.58%	-28.98%	\$39,255
her Durables	1.0	5.8	5.4	4.3	-0.4	412.94%	%96.9-	\$27,671
	14.0	14.5	13.8	-0.1	9.0-	-0.95%	-4.38%	\$22,102
	2.5	2.7	3.4	6.0	0.7	38.45%	25.63%	\$21,982
7	1.5	1.5	6.0	9.0-	-0.5	-39.47%	-37.38%	\$14,777
	2.4	2.7	2.3	-0.1	-0.4	-3.19%	-15.74%	\$26,362
	3.6	4.2	4.7	1.2	9.0	33.58%	14.27%	\$21,260
	1.6	1.5	1.1	-0.4	-0.4	-28.52%	-26.13%	\$24.533
	2.6	2.0	1.4	-1.2	9.0-	-45.41%	-28.62%	\$21.216
Transportation & Public Utilities	8.4	9.5	10.6	2.2	1.2	26.38%	12.34%	\$26.514
e, Insurance & Real Estate	6.4	10.1	11.9	5.5	1.8	85.27%	17.40%	\$24.938
	32.8	50.1	56.8	24.1	6.7	73.54%	13.44%	\$14,627
	32.3	54.0	69.3	37.1	15.3	115.00%	28.40%	\$17,505
Government	28.7	37.4	43.2	14.5	5.8	50.47%	15.47%	N.A.

^{*} Reflects six-month mean (January to June of 1992)

** "Covered" wages refer to wages earned by workers "covered" under Vermont's unemployment insurance law Sources: U.S. Department of Labor, Bureau of Labor Statistics, and Vermont Department of Employment and Training

Table 2

Vermont Share of U.S. Nonfarm Employment by Industrial Category 1972-1991

Percent Share of U.S. Industrial Category	1972	1979	1983	1985	1988	1991
TOTAL	0.208%	0.220%	0.229%	0.231%	0.243%	0.229%
Mining	0.127%	0.084%	0.058%	0.054%	0.077%	0.072%
Construction	0.267%	0.233%	0.277%	0.295%	0.343%	0.249%
Manufacturing	0.217%	0.241%	0.258%	0.259%	0.257%	0.238%
Durables	0.250%	0.277%	0.318%	0.309%	0.311%	0.284%
Lumber	0.419%	0.537%	0.537%	0.520%	0.514%	0.493
Furniture	0.528%	0.562%	0.424%	0.426%	0.445%	0.403%
Stone, Clay & Glass	0.411%	0.364%	0.398%	0.413%	0.466%	0.448%
Machine Tools	0.469%	0.275%	0.236%	0.216%	0.213%	0.212%
Fabricated Metals/Computers	0.303%	0.412%	0.532%	0.507%	0.478%	0.423%
Other Durables	0.025%	0.094%	0.131%	0.138%	0.157%	0.146%
Nondurables	0.172%	0.186%	0.177%	0.185%	0.180%	0.174%
Food	0.140%	0.144%	0.146%	0.168%	0.193%	0.209%
Apparel	0.108%	0.123%	0.146%	0.129%	0.106%	0.089%
Paper	0.346%	0.387%	0.398%	0.402%	0.355%	0.320%
Printing	0.324%	0.316%	0.289%	0.291%	0.313%	0.308%
Rubber/Plastics	0.232%	0.207%	0.182%	0.183%	0.133%	0.122%
Other Nondurables	0.100%	0.121%	0.084%	0.091%	0.075%	0.063%
Transportation & Public Utilities	0.185%	0.173%	0.177%	0.180%	0.192%	0.187%
Finance. Insurance & Real Estate	0.164%	0.157%	0.162%	0.170%	0.186%	0.183%
Trade	0.205%	0.203%	0.211%	0.217%	0.240%	0.226%
Services	0.263%	0.248%	0.250%	0.245%	0.250%	0.241%
Government	0.215%	0.224%	0.229%	0.228%	0.235%	0.237%

Sources: U.S. Department of Labor, Bureau of Labor Statistics and Vermont Department of Employment and Training

Table 3

Vermont's Workforce

National Rank on Selected Key Indicators

Workforce Quality Indicators (a high* ranking is preferred)

	Nationa	l Rank
<u>Indicator</u>	(first year)	(last year)
State and local expenditures for education per \$1000 of income (1987 & 1989)	7	6
Average per pupil expenditure for elementary and secondary schools** (1981 & 1991)	23	13
Value added per employee (1987)	45	

Cost Competitiveness Indicators (a low* ranking is preferred)

	Nation	nal Rank
<u>Indicator</u>	(first year)	(last year)
	•	
Rate of unemployment*** (1985 & 1991)	5	25
Average hourly earnings of factory production workers (1989 & 1991)	34	25
Union membership as a percentage of covered factory employment (1984 & 1989)	39	41
Percent increase in wages of manufacturing production workers (1989 to 1991)	2	
Maximum weekly workers' compensation benefit (1992)	6	

^{* 1} is high; 50 is low

^{**} Based on average daily attendance

^{***} A high ranking indicating a low level of unemployment suggests tight labor market conditions and higher labor costs

Table 4

Vermont's Banking Sector

National And Regional Rank on Selected Key Indicators (a high* ranking is preferred)

Indicator	National Rank	New England Regional <u>Rank</u>
Commercial Banks Profitability		
Return on assets at commercial banks (1990)	25	1st of 6
Change in net income at commercial banks (1990)	38	1st of 6
Asset Quality		
Increase in non-performing loans at commercial banks (1990)	36	3rd of 6
Savings Institutions Profitability		
Return on assets at SAIF**-insured savings institutions (1990)	8	1st of 6
Net income at SAIF**-insured savings institutions (1990)	15	1st of 6
Savings Institutions Asset Quality		
Mortgage loans foreclosed at SAIF**-insured savings institutions	38	4th of 6

^{* 1} is high; 50 is low

^{**} SAIF--Savings Association Insurance Fund

Table 5

Vermont's "Quality of Life" Comparison
National Rank on Selected Key Indicators

Indicator	Natio (first year)	nal Rank* (last year)
Positive "Life Quality" Factors (a high* ranking is preferred)		
State disposable personal income per person (1986 & 1991)	31	26
Physicians per 100,000 persons (1985 & 1990)	5	6
	<u>1991-92</u>	Survey
"Fun & Quality of Life" score per the green index**		12
Negative "Life Quality" Factors		nal Rank (last year)
(a low* ranking is preferred)		
Violent crime*** rate per 100,000 population (1985 & 1990)	47	49
Percentage of population below the poverty level (1984 & 1990)	17	16

^{* 1} is high; 50 is low

^{**} Institute for Southern States and Island Press

^{***} Defined as murder, forcible rape, robbery, and aggravated assault

Table 6

Vermont's Infrastructure

National Rank on Selected Key Indicators

(a high* ranking is preferred)

Indicator	National Rank
"Condition" Indicators	
Percent of highway mileageinterstate or other principal arterial (1988)	18
Percent of highway bridges structurally deficient (per federal highway administration) standards as of June 26, 1989)	28
Estimated sewage treatment needs per capita (1989)	42
Percent change in federal R&D funds obligated (1980-88)	4

^{* 1} is high; 50 is low

Table 7

Vermont's Fiscal Burden

National Rank* on Selected Key Indicators

		Natio	nal Rank*
	Indicator	(first year)	(last year)
\$1,000	& local tax collections per 0 of personal income (current \$) & 1990)	13	19
\$1,00	& local direct expenditures per 0 of personal income (current \$) & 1990)	13	12
equiva 10,00	& local government full-time alent employment per 0 population & 1990)	33	21
Exper	ditures per person	<u>1990</u>	2
(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) Tax r (1) (2) (3) (4) (5)	Education (elementary & secondary) Education (higher) Public welfare Health Hospitals Police Fire Highways Sewerage Salary and wages evenues** per person Taxes on Income** Property Taxes General Sales Taxes Selective Sales Taxes Interest Earnings	6 4 13 31 50 38 39 10 20 20 1990 22 10 46 4 4 28	<u>)</u>
**	Ranked 1 (highest burden) to 50 (lowest From own revenue sources (net of interpretable and the sources).		enue)

Includes individual and corporate income taxes

VERMONT BUSINESS ROUNDTABLE

Economic Development Study Committee

Chairman:

John S. Kimbell, Vermont Gas Systems, Inc.

Committee Members:

Ross R. Anderson, The Nordic Group, Inc.; Christopher G. Barbieri, Vermont Chamber of Commerce; Pennie Beach, Basin Harbor Club; Owen Becker, IBM Technology Products; C. Harry Behney, Greater Burlington Industrial Corporation; Charles I. Bunting, Vermont State Colleges; James Carey, The Burlington Free Press; David R. Coates, KPMG Peat Marwick; John A. Cobb, Vermont Federal Bank, FSB; David Coen, Fishman's Department Stores, Inc.; Maxwell E. Eaton, Jr., Otter Creek Industries, Inc.; Otto Engelberth, Engelberth Construction, Inc.; John T. Ewing, Bank of Vermont; Gary N. Farrell, Sheraton Burlington Hotel and Conference Center; Michael D. Flynn, Gallagher, Flynn & Company; Peter A. Foote, Associated Industries of Vermont; Peter Heinz, Karl Suss America, Inc.; Thomas Hurcomb, Central Vermont Public Service Corporation; James Lamphere, Wiemann-Lamphere Architects, Inc.; Nancy Lang, Lang Associates; Kenneth J. Leenstra, General Electric Co.; Maynard McLaughlin, Bread Loaf Construction Company, Inc.; Martin Miller, Miller, Eggleston & Rosenberg, Ltd.; Kelton B. Miller, Bennington Banner/Brattleboro Reformer; T. Kent Mitchell, House of Troy; Will Raap, Gardener's Supply Company; A. Wayne Roberts, Lake Champlain Regional Chamber of Commerce; Andrew R. Rockwell, New England Telephone Company; Carl J. Rosenquist, Wyeth Nutritionals Inc.; Janice E. Ryan, Trinity College; Yoram Samets, Kelliher/Samets Marketing Communications; Barbara Sauer-Sandage, Sandage Advertising & Marketing, Inc.; William H. Schubart, Resolution, Inc.; Albin Voegele, Vermont Republic Industries

Staff: Maxine N. Brandenburg, President, Vermont Business Roundtable; Beth F. Volker, Executive Assistant, Vermont Business Roundtable

Consulting Economist: Jeffrey B. Carr, Vice President & Economist, Economic & Policy Resources, Inc.

Editor: Carol Smith Pynchon

Officers, Directors, and Members

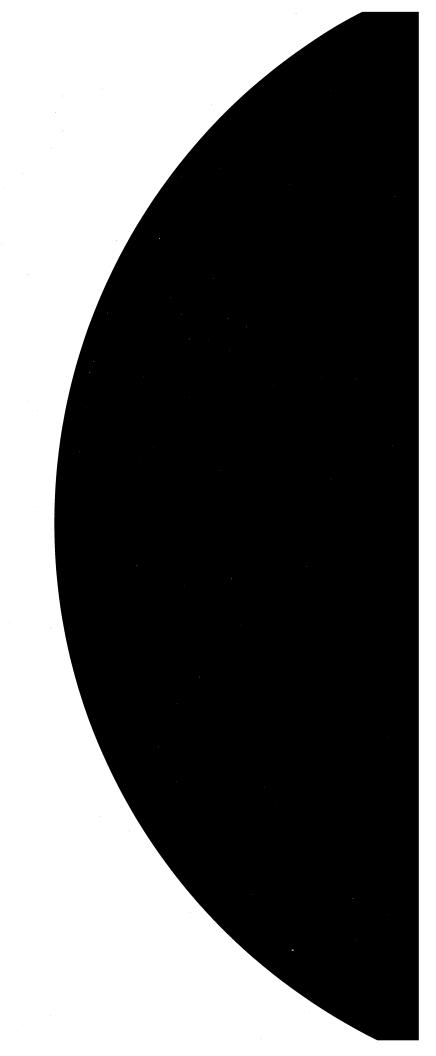
Officers

Chairman: Richard W. Mallary, Vermont Electric Power Company, Inc.; First Vice Chairman: Frederic H. Bertrand, National Life Insurance Company; Second Vice Chairman: Andrew R. Rockwell, New England Telephone Company; President: Maxine N. Brandenburg, Vermont Business Roundtable; Secretary: Nordahl L. Brue, Champlain Management Company; Treasurer: Michael D. Flynn, Gallagher, Flynn & Company

Directors: Charles I. Bunting, Vermont State Colleges; William H. Chadwick, Banknorth Group, Inc.; John A. Cobb, Vermont Federal Bank, FSB; David Coen, Fishman's Department Stores, Inc.; Douglas A. Grose, IBM Technology Products; John D. Hashagen, Jr., Vermont National Bank; Peter Heinz, Karl Suss America, Inc.; F. Ray Keyser, Jr., Central Vermont Public Service Corporation; John S. Kimbell, Vermont Gas Systems, Inc.; Nancy Lang, Lang Associates; Kenneth J. Leenstra, General Electric Co.; Maynard McLaughlin, Bread Loaf Construction Company, Inc.; T. Kent Mitchell, House of Troy; R. Allan Paul, Paul, Frank & Collins, Inc.; Donald Preston, Bijur Lubricating Corporation; Will Raap, Gardener's Supply Company; Patrick S. Robins, McAuliffe, Inc.; Janice E. Ryan, Trinity College; Thomas P. Salmon, The University of Vermont; James Taylor, Medical Center Hospital of Vermont; Albin Voegele, Vermont Republic Industries

Members: Ross R. Anderson, The Nordic Group, Inc.; Peter Asch, Twincraft, Inc.; John Baackes, Community Health Plan; Stephen Baker, Baker's, Inc., DBA Baker's Office Products; Christopher G. Barbieri, Vermont Chamber of Commerce; Stephen Bartlett, Agri-Mark, Inc.; Pennie Beach, Basin Harbor Club; C. Harry Behney, Greater Burlington Industrial Corporation; Robert Boardman, Hickok & Boardman, Inc.; Steven J. Bourgeois, Franklin Lamoille Bank; Joseph L. Boutin, The Howard Bank, N.A.; James Bowse, Rutland Regional Medical Center; William J. Breed, Johnson & Dix Fuel Corporation; William H. Brooks, Vermont Mutual Insurance Company; James Carey, The Burlington Free Press; Ted Castle, Rhino Foods, Inc.; Thomas Chase, Pizzagalli Construction Company; Robert G. Clarke, Vermont Technical College; John V. Cleary, Green Mountain Power Corporation; Richard Cohen, C & S Wholesale Grocers, Inc.; Elizabeth Coleman, Bennington College; John J. C. Cronin, Fanny Allen Hospital; William E. Dailey, III, William E. Dailey, Inc.; James L. Daily, Porter Medical Center, Inc.; William D. Davis, Cabot Farmers' Cooperative Creamery Company, Inc.; James L. Donohue, Urbach, Kahn & Werlin, P.C.; Thomas Dowling, Ryan Smith & Carbine, Ltd.; Philip Drumheller, The Lane Press, Inc.; Maxwell E. Eaton, Jr., Otter Creek Industries, Inc.; Argie Economou, Dean Witter Reynolds, Inc.; Otto Engelberth, Engelberth Construction, Inc.; John T. Ewing, Bank of Vermont; Gary N. Farrell, Sheraton Burlington Hotel and Conference Center; Peter A. Foote, Associated Industries of Vermont; Walter Freed, Johnson's Fuel Service, Inc.; William A. Gilbert, Downs, Rachlin & Martin, P.C.; Robert M. Gillis, First Vermont Bank; Hope S. Green, Vermont ETV; Edward J. Grover, Marble Bank; Luther F. Hackett, Hackett, Valine & MacDonald, Inc.; Timothy Hayward, Vermont Bankers Association, Inc.; Ronald W. Hodges, BF Goodrich Aerospace, Simmonds Precision Aircraft Systems; Harry Holland, Clifford of Vermont, Inc.; Robert Ide, E.T. & H.K. Ide, Inc.; Daniel S. Jones, Readex Microprint Corporation; Preston Jordan, Blue Cross and Blue Shield of Vermont; Donald S. Kendall, Mack Molding Company, Inc.; A. Jay Kenlan, Abell, Kenlan, Schwiebert & Hall; James C. Kenny, Harbour Industries, Inc.; Lewis M. Kiesler, Topnotch at Stowe Resort and Spa; Spencer R. Knapp, Dinse, Erdmann & Clapp; Charles Kofman, Merrill, Lynch, Pierce, Fenner & Smith, Inc.; Robert L. Krattli, Scott-European Corporation; Peter Kreisel, Kreisel, Segear & Co.; James Lamphere, Wiemann-Lamphere Architects, Inc.; Philip Levesque, Gifford Memorial Hospital; Pierre Lortie, Bombardier Capital, Inc.; Peter Martin, Mt. Mansfield Television Company, Inc.; Bernier Mayo, St. Johnsbury Academy; John M. McCardell, Jr., Middlebury College; Mary Alice McKenzie, John McKenzie Packing Company, Inc.; Kelton B. Miller, Bennington Banner/Brattleboro Reformer; Martin Miller, Miller, Eggleston & Rosenberg, Ltd.; Gordon P. Mills, Elcon Management Services; R. John Mitchell, The Times Argus; Stephan Morse, Grafton Village Cheese Company, Inc.; Lyman Orton, The Vermont Country Store, Inc.; Rudy Pachl, C. J. Van Houten & Zoon, Inc.; Kenneth G. Perkins, International Paper: Paul A. Perrault, Chittenden Corporation; Roger H. Perry, Champlain College; Edward C. Pike, Kinney Pike Bell and Conner, Inc.; Stephen S. Rauh, Rauh & King Inc.; Lawrence H. Reilly, Union Mutual Fire Insurance Company; Paul J. Reiss, Saint Michael's College; A. Wayne Roberts, Lake Champlain Regional Chamber of Commerce; Carl J. Rosenquist, Wyeth Nutritionals Inc.; John A. Russell, Jr., John A. Russell Corporation; Yoram Samets, Kelliher/Samets Marketing Communications; Barbara Sauer-Sandage, Sandage Advertising & Marketing, Inc.; Richard W. Schneider, Norwich University; William H. Schubart, Resolution, Inc.; Charles Shea, Gravel and Shea; David Sheldon, Shelburne Museum; Joseph Siliski, Jr., Siliski & Buzzell, P.C.; Kurt Swenson, Rock of Ages Corporation; Harlan C. Sylvester, Shearson Lehman Brothers; Eugene Torvend, Champlain Cable Corporation; William H. Truex, Jr., Truex deGroot Cullins, Architects; Henry M. Tufo, University Health Center; Francis Voigt, New England Culinary Institute; J. Alvin Wakefield, Gilbert Tweed Associates, Inc.; Thomas Webb, Central Vermont Public Service Corporation; J. Gary Weigand, Vermont Yankee Nuclear Power Corporation; Jon Wettstein, Digital Equipment Corporation; Glen A. Wright, KPMG Peat Marwick; J. Peter Yankowski, Green Mountain Bank; Harvey Yorke, Southwestern Vermont Medical Center; OMYA, Inc.

Established in 1987, the Vermont Business Roundtable is a non-partisan organization dedicated to helping Vermont achieve long-term public policy objectives worthy of its citizens. Composed of the principal officers of 125 Vermont companies representing geographic diversity and all major sectors of the economy, the Roundtable is committed to achieving a healthy economy and preserving Vermont's unique quality of life.



Courthouse Plaza
199 Main Street
Burlington, Vermont 05401
(802) 865-0410 ■ Fax (802) 865-0662