

WORKING PAPER:

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

Part III: The Competitive Position of Vermont

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EXECUTIVE SUMMARY

Introduction

Vermont today faces enormous economic challenges. Like the entire New England region, 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 <u>permanently</u> in several of Vermont's key industrial sectors. This permanent job loss is having a significant and negative economic spillover effect on people all over the state.

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. The previous two studies of this working paper series (Parts I and II were published in January of 1993) presented an evaluation of recent economic performance in the state and a description and analysis of the competitive advantages and disadvantages of Vermont's economy.

The state's economy is at a turning point. The still sluggish U.S. recovery provides Vermont with an opportunity to take the sometimes politically difficult steps to resolve the state's long-term problems. If we fail to address our basic economic problems, we risk continuing the state's economic decline.

The Vermont Business Roundtable believes we must develop a new consensus for action: it is time to resolve some of our questions and find <u>real</u> solutions to Vermont's fundamental economic problems. We must recognize that as business people, public officials, 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.

Competitive Position of Vermont Business

As part of the series of reports reviewing and evaluating Vermont's economic competitiveness, this analysis examines the competitive position of Vermont businesses relative to the businesses in a group of 16 "key competitor" states and areas in continental North America. The study focuses on 44 indicators chosen to provide an objective framework for gauging Vermont's relative performance and/or its position in categories including availability of capital, infrastructure quality, labor force quality and cost, social policy, and quality of life. The data for the selected indicators were grouped into one of eight categories: (1) financial capital, (2) infrastructure (i.e., hard asset infrastructure), (3) energy costs, (4) human capital, (5) labor costs, (6) taxing and spending burdens, (7) social policy, and (8) quality of life.

Overall, the study found that Vermont fares well in the comparative quality of human capital resources, several aspects of direct labor costs, and quality of life. Vermont also ranks relatively high in about fifty percent of the selected social policy variables examined. Competitively speaking, these criteria can be viewed as sources of Vermont's competitive strength.

On the other hand, Vermont competes poorly when it comes to energy costs and the burdens associated with its governmental taxing and spending. These areas represent the state's relative competitive weaknesses. They should be viewed as opportunities for Vermont businesses and policymakers to take action to improve the state's competitive standing.

Competitiveness is often viewed in abstract terms, but it directly affects the state's ability to retain and nurture its existing businesses. It also affects the ability of Vermont to attract new businesses and ventures to diversify or expand the state's economic base.

The competitiveness process is a complex interaction of business costs, relative product quality and service, and the pricing capability of Vermont businesses within the constraints of the stiff challenges in regional, national, and international markets. Business costs (such as wage rates, transportation costs, fees, and taxes), and the product quality and service are factors that are primarily driven by state and local forces. Pricing capability is largely determined by factors and forces which lie well beyond our borders or control.

Vermont businesses today have little, if any, flexibility to raise prices. This is primarily the result of the sluggish U.S. economy, and the fact that the geographic region with which Vermont firms compete today has expanded significantly to include companies in places that were considered too far away to pose a competitive threat just ten years ago. Yet Vermont businesses must continue to recover (over the long run) all of the costs they pay in order to survive as a business.

If the prices charged by Vermont businesses to recover their costs are out of line with their competitors, Vermont businesses will lose their markets to other customers. That would adversely impact Vermont's employment growth and, in severe cases of lost market share, cause employment reductions.

The common thread in competitiveness is the ability of an area's businesses to meet the challenges and demands of the global marketplace for products and services on the basis of affordable pricing and equal or superior product/service quality. The "costs-to-prices-to-jobs" mechanism described above affects the lives of all Vermonters. While the competitiveness connection may at times appear indirect, it does have a significant and direct bearing on the living standards and employment opportunities of Vermonters and their families.

Conclusion

The Vermont Business Roundtable presents the results of this study to help you better understand the economic position of Vermont business today in comparison with its competitors in the region, the country, and the world. Vermonters must understand every aspect of Vermont's dynamic economy if we are to come up with <u>sustainable</u>, <u>long-term</u> strategies to enhance our state's economic strength and competitiveness now and in the future. We must work <u>together</u>, 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.

THE COMPETITIVE POSITION OF VERMONT BUSINESS

Introduction

This study is the third in an ongoing series of reports reviewing and evaluating Vermont's economic competitiveness. This analysis examines the competitive position of Vermont businesses relative to a group of 16 "key competitor" states and areas in continental North America. The study uses a series of 45 indicators, which were chosen to provide an objective framework for gauging Vermont's performance and/or its position versus its primary competing states and areas on the broad fronts of availability of capital, infrastructure quality, labor force quality and cost, social policy, and quality of life.

As a general rule, this study uses the most recent published data available for comparison.² The data for the selected indicators were grouped into one of eight categories, including: (1) financial capital, (2) infrastructure (i.e., hard asset infrastructure), (3) energy costs, (4) human capital, (5) labor costs, (6) taxing and spending burdens, (7) social policy, and (8) quality of life.

Overall, this study found that Vermont fares well in the comparative quality of: (1) human capital resources [Table 4], (2) several aspects of direct labor costs [Table 5], and (3) quality of life [Table 8]. Vermont also ranks relatively high in roughly one-half of the selected social policy variables employed and evaluated in this analysis [Table 7]. In a competitive context, these criteria overall can appropriately be viewed as sources of Vermont's competitive strength.

Conversely, Vermont does poorly in the areas of energy costs [Table 3], and in the burdens associated with its governmental taxing and spending [Table 6]. For the purposes of this analysis, these criteria represent areas of relative competitive weakness. They should be viewed as opportunities for Vermont businesses and policymakers to take action to improve the state's competitive standing.

Although it is acknowledged that there may be other indicators that could be included in this analysis, the 44 criteria selected represent a broad range of indicators that are generally readily available from published sources. This analysis relied heavily on third party sources when possible so that the level of calculation and data manipulations by the investigators was held to a minimum. In addition, these indicators were selected because, for the most part, they themselves, or at least the basic data used to calculate them, are likely to

¹ For an explanation of selection criteria for Vermont's "key competitors," see Appendix 1.

² In some cases, because of the extraordinary economic circumstances that prevailed in the mid- to late-1980s and during the 1989-91 period, time periods were selected to minimize the distorting impact of these unusual economic circumstances.

be available in updated versions or forms when this analysis will be revisited in the future.

Why Worry About Competitiveness?

The competitiveness of a state or region is often viewed as an abstract idea--it is a complex concept and its tangible impacts are frequently indirect. While Vermonters may not readily recognize the significance of one ranking versus another in their everyday lives, the state's competitiveness has a direct bearing on job creation and retention.

Competitiveness manifests itself in many ways and frequently is disguised by clichés relating to the "productivity recovery" or the "increasingly competitive global economy." The impact of competitiveness on jobs and income growth is real, even if it is cloaked in explanations that address only the symptoms or results of the interstate and international competitiveness phenomenon.

Competitiveness in general terms reflects a combination of two important matters: (1) the relative costs of doing business in an area versus in the rest of the world, and (2) the comparative stability, consistency, and flexibility in regulations relating to the rules and responsibilities of business operations and organization. Although direct business costs for employers in a particular area (i.e., for land, labor, capital, and transportation) have always been important competitive considerations, the indirect cost burdens associated with an area's regulatory climate have recently been rising in importance. The common thread in competitiveness is the ability of an area's businesses to meet the challenges and demands of the global marketplace for products and services on the basis of affordable pricing and equal or superior quality.

In fact, only if Vermont companies can successfully meet the increasingly tough demands of expanding global markets, will it be possible for Vermonters to enjoy an improving standard of living. In addition, only an expanding job and income base will provide the government with the resources it needs to simultaneously protect the environment, provide for a humane social "safety-net," and assure a quality of life that is consistent with the desires of its population.

Relating Competitiveness to Vermont

This mechanism for economic success certainly applies to Vermont. How competitiveness affects Vermont business requires an understanding that the prices that Vermont companies can charge for their products and services today is largely determined by factors and forces that lie far beyond the state's borders or control. Yet the costs that Vermont's businesses must shoulder are to a significant degree determined by Vermont state and local factors.

It must be remembered that customers in far away places have many non-Vermont product and/or service choices, and the prices charged by Vermont businesses for Vermont

products and services must consider those potential purchasing alternatives. The same is true for Vermonters patronizing stores within the borders of the state. The prices charged for Vermont goods and services in Vermont must take into account that there are acceptable-albeit imperfect--substitutes for Vermont products and services even in retail stores right here at home.

This understanding is critical because all costs³ imposed on Vermont's businesses must eventually be recovered in the prices charged for their goods and services. Price increases that are out of line with our competitors' could lead to lost market share if our customers believe that the attributes of Vermont products and services are not worth such a price increase. If Vermont's businesses lose market share, they will not be able to expand their employment base. If the loss in market share is significant enough, Vermont employers may even be forced to reduce their payroll levels below those that existed when prices were forced to increase.

The "costs-to-price-to-jobs" linkage is critical in understanding the connection between Vermont's competitiveness and tangible job and income impacts on the lives of Vermonters. It clearly demonstrates that, while this competitiveness connection is at times indirect, it does have a significant and direct bearing on the living standards and opportunities of all Vermonters and their families.

The Recent Performance of Vermont's Economy--How Are We Doing?

Clearly, the majority of Vermont's leading economic indicators show that the state's economy is slowly emerging from one of the most difficult periods to affect the state since the 1930s. Although Vermont has been in a statistical recovery since February of 1992, with total employment up by about one percent over Vermont's recessionary lows, the economy today still has nearly 12,000 (or 4.5 percent) fewer non-farm jobs than existed prior to the onset of its three-year decline. Consumer and business confidence remain fragile. It appears that the Vermont economy--indeed the economy for the entire New England region--will have to get accustomed to job and personal income growth rates well below those experienced during the mid- to late-1980s.

Ongoing structural changes in Vermont's economic base (mostly in defense industries and in the computer sector) continue to plague the state's manufacturing sector. In addition, the holdover effects of the late-1980s collapse in the regional construction, real estate, and financial services industries continues to have a significant and negative effect on job creation and credit availability throughout Vermont and across all of New England.

Explanations of what went wrong in the Vermont and New England economies were detailed and discussed in a previous part of this Vermont Business Roundtable series. In that

³ Including all those paid for land, labor, capital, resource inputs, transportation, and taxes and/or fees.

report, the primary factors that are apparently behind the state's relatively poor economic performance were defined as:

- Problems associated with the national recession and subsequent weak recovery--Because Vermont remains a part of the national economy, it is not immune to the inevitable ups and downs of the national business cycle. The unusually slow recovery in job growth during the current national business cycle has clearly adversely impacted Vermont's economy, especially in its nationally sensitive manufacturing sector.
- The end of the national defense build-up--Although the Vermont economy is proportionally less dependent than the region on the military for output, it should be noted that the state receives significant indirect economic benefits (e.g., Tourism) from a healthy New England defense industry. The current projected declines in national defense spending and the likelihood of additional federal defense budget cuts will continue to hamper, if not reduce, employment in defense and defense-dependent sectors of the Vermont economy.
- The maturation of the "high technology" and computer industries--Like the New England region as a whole, Vermont has suffered from the intense level of international competition and other changes within the computer industry. Given the well-publicized, company-specific downsizing at leading "computer" employers in Vermont, the state's largest manufacturing sector is likely to continue to reduce employment levels from time to time during the 1990s. It certainly will not be the source of job creation that it was during the late 1970s and early 1980s.
- **Problems in agriculture**--Vermont's agricultural sector remains heavily dependent on a healthy dairy industry for its vitality. Although in recent years it has diversified, more than three-quarters of all agricultural receipts are earned by Vermont's dairy industry.
 - The dramatic decline in milk prices over the past two years has placed many Vermont dairy farms at risk. It has placed enormous pressures on the roughly 1,700 to 1,800 dairy enterprises in Vermont and their large network of supporting businesses and other economic infrastructure. This trend is unfortunately likely to continue over at least the near term, and its associated negative employment effects are not likely to end any time soon.
- Loss of Vermont's and New England's cost competitiveness to domestic competition—The relative economic success of the 1980s in New England gave rise to sharply increasing cost competition from both foreign concerns and businesses located in other parts of the United States. These cost

competitiveness problems for the entire New England regional economy⁴ hurt business activity in Vermont and have clearly prompted numerous workforce reductions and cost-cutting initiatives at key employers across the region.

Restructuring in financial services—Although Vermont's banking sector continues to be one of the strongest in the Northeast, the ongoing employment restructuring in the banking and financial services sector in Vermont has had a significant and negative impact on the state economy. This same restructuring, in combination with the aftereffects of the regional real estate collapse and restrictive federal lending regulations, has restricted credit availability at a time when the economy most needs affordable credit to support growth in non-financial enterprises such as manufacturing and construction.

Beyond those factors, another trend is worthy of mention here. It involves the disturbing two-decade-long trend in which all of the "net" new job growth in the Vermont economy occurred outside of manufacturing, in the state's services, trade, finance, and governmental sectors. Although the pace of job increases in the public sector is slowing, the fact that jobs in Vermont's basic goods-producing, manufacturing sector have declined in each year since 1986 raises serious concern about the sustainability of job growth in service-producing categories. Recent research confirms that many service-producing sectors depend on the goods-producing side of the economy to sustain them over time. Therefore, a healthy Vermont economy over the long-term is best assured by a viable and growing Vermont factory sector.

⁴ "What Next For New England? The State of the Region's Economy." <u>Bank of Boston</u>, November 1990.

⁵ "The Role of Services in New England's Rise and Fall: Engine of Growth or Along for the Ride?" <u>New England Economic Review</u>, July/August 1991, pp. 27-44.

ASSESSING VERMONT'S COMPETITIVENESS

Table 1: Non-Labor Costs--Financial Capital

This first set of competitiveness indicators involves four financial criteria that are evaluated to assess capital availability for Vermont and its competitors. The goal of the comparisons in Table 1 is to present a broad enough "credit-availability" snapshot so that a fairly complete picture of credit availability from both traditional and non-traditional credit sources is portrayed for a "normal" or "typical" economic period.

Affordable credit is the lifeblood of our credit-driven economy. Over time, investment is required to maintain (at a minimum) and add to the economy's existing productive capacity. A state-of-the-art and productive investment base is essential for nurturing new employment opportunities for Vermonters and their families.

Businesses in Vermont raise funds for investment in many ways. Depending on the size and particular circumstances of a firm, investment funds (known as "capital") can be acquired from sources ranging from personal savings and personal loans (for smaller concerns) to commercial loans, commercial paper, and stock offerings (for larger concerns).

Retained earnings--so called because they are earnings (or profits) from operations that are held in reserve, or retained--provide an important basis for sustaining the firm as an ongoing concern. Frequently, retained earnings are crucial to obtaining funds for making future investments. Any business tax or fee that reduces business earnings without an offsetting, greater public benefit can have an adverse impact on future capital investments and ultimately on employment opportunities for Vermonters. (Taxes are addressed in a subsequent section of this working paper.)

This analysis shows that, on balance, Vermont businesses generally have access to the credit they need to expand, modernize, and grow. Although the recent three-year recession created some credit difficulties, Vermont's financial infrastructure and credit supplies have had to endure the most difficult and challenging set of economic circumstances since the 1930s.

Of particular note is the fact that Vermont seems to score reasonably well for a non-money-center state in the indicator intended to measure access to capital from non-traditional sources (i.e., private venture capital funds). This is encouraging because these non-traditional sources of capital are critical for novel, sometimes speculative ideas. If Vermont is to tangibly take advantage of its entrepreneurial spirit advantage, its innovators need financing to make those ideas become reality.

However, that is not to say that improvements in capital availability cannot be made. Vermont's relatively high national ranking in venture capital disbursements per person may reflect nothing more than the fact that venture capital firms still operated in a relatively few

number of states in 1989, and that lower ranking states may simply be grossly under-funded.

In addition, Vermont's relatively low regional and national ranking may reflect a relative lack of inclination and/or sophistication in commercial and industrial lending. Specific answers to those concerns will likely not be known for several years, at least until the lingering effects of the punishing regional economic recession have had a chance to fully run their course.

1. Commercial and industrial (C&I) loans outstanding per worker (as of June 30, 1990).

One way to evaluate the availability of capital resources in an area's economy is the dollar value of commercial and industrial loans outstanding per worker. By dividing the value of outstanding C&I loans by the number of workers, it is possible to see how aggressive an area's banks are in providing capital to area businesses in a size-standardized way.

We did not use the most recent data available for this comparison. Instead we employed the amount of C&I loans outstanding as of June 30, 1990, to minimize the distorting effect of the extraordinary circumstances of the mid- to late-1980s boom and the subsequent 1989-92 collapse in financial services in New England.

Vermont ranks 9th best among its key competitors and 23rd best overall when compared to the other 49 states in this indicator. This middle-of-the-road status suggests that Vermont banks are doing a reasonably good job of meeting the needs of Vermont businesses. In fact, that ranking probably reflects a "good" competitiveness status considering no fewer than five of the higher ranking states among Vermont's competitors are "money-center" states.⁶

The fact that all of those states ranked higher than Vermont points to the chief weakness in this statistic for analytical purposes. In today's world, banks can make loans to businesses that are outside of their state and it is virtually impossible to segregate those loans for the purposes of this analysis.

The series used in this analysis is a calculated total dollar amount of C&I loans outstanding for the second calendar quarter of 1990 for each state (in dollars per worker). The amount of C&I loans outstanding is reported by the U.S. Federal Deposit Insurance Corporation (FDIC), and the number of non-farm production workers is reported by the U.S. Department of Labor.

⁶ Including California, Connecticut, Massachusetts, Minnesota, and New York.

2. Commercial and industrial (C&I) loans outstanding as a percent of total loans outstanding (as of June 30, 1990).

Another way to look at the issue of credit availability is to calculate the percentage of total loans made to commercial and industrial customers (versus mortgages and consumer loans). Like #1 above, a higher percentage is indicative of an aggressive lending posture. A lower percentage would suggest that banks and other regulated financial institutions are not as aggressive in meeting the credit needs of their business community.

Vermont ranks in the worst third of its key competitors, occupying the level of 13th (among the group of 16 states), its worst relative position among these four capital availability criteria. Only Florida, New Hampshire, and South Carolina rank lower than Vermont; this suggests that Vermont firms may have to look more to out-of-state financial center banks to meet their lending needs.

However, that interpretation must be viewed within the context of the exceptionally weak economy that affected the entire New England region, even though by the second calendar quarter of 1990 the banking collapse had not yet reached crisis proportions. The weak economy probably influenced this indicator in three ways: (1) there simply was less demand for C&I loans; (2) losses from "bad" loans reduced the amount of bank assets available for more risky C&I lending; and (3) banks adopted more conservative lending practices in the face of more stringent federal lending regulations.

This analysis utilized statistics published by the FDIC. The time period selected was the second calendar quarter of 1990, for the same macroeconomic reasons described.

3. Capital as a percent of total assets (as of June 30, 1992).

Another key to credit availability is the long-term "safety and soundness" of an area's banking system. The healthier the fundamentals are of a banking system, the more likely that the amount of affordable capital will be larger over time and the economy will therefore have a greater financial capacity for growth.

A key indicator of the relative health of a political jurisdiction's banking system is its level of "capital" as a percentage of total assets. Capital is a bank's first line of defense against bad loans. It also is of paramount importance to bank regulators in today's new world of banking. In fact, banks that find themselves in a relatively thinly capitalized position have their business activities dramatically curtailed. Such restrictions have implications on the non-financial businesses they are supposedly serving.

As opposed to more traditional mortgage lending and other better-secured lending alternatives.

Vermont again ranks near the middle in this indicator (27th best nationally and 9th best among its key competitors). While on the surface this would not appear to be an enviable position, it should be noted that the Vermont banking system has maintained a solid capital position throughout the regional banking crisis. Its middle-of-the-pack position has not come about because of the rapid shrinkage of its asset base due to the large bank failures and/or massive loan write-offs that have occurred in several other more highly ranked New England states (i.e., New Hampshire and Maine). This ranking is in reality better than it initially seems.

This indicator, like the two above, utilizes statistics reported by the FDIC for regulated financial institutions. The time period used is for the calendar quarter ending June 30, 1992--a good post-banking crisis benchmark. It also is important to note that this comparison utilizes only a bank's so-called tangible capital, which reflects real financial resources and includes no intangibles and does not include "goodwill" as a part of its capital base calculation.

4. Venture capital per person (1989).

Venture capital firms typically provide early project financing to certain prototype business endeavors that conventional financing sources usually avoid. This financing source can be important for cultivating the formation and expansion of new, high-growth companies and industries.

A high participation rate by venture capital firms is indicative of a dynamic area economy with multiple investment opportunities. Conversely, a low participation rate could suggest that entrepreneurial investment opportunities and a dynamic economy were not as prevalent as in other states and areas. Vermont's economy fits into the description of the former, ranking in the top half of its key competitors and 12th best among the 50 states in 1989.

The indicator employed in this analysis was taken from the Venture Capital Yearbook 1990, produced by Venture Economics, Inc., of Dedham, Massachusetts. This indicator specifically reports private venture capital fund disbursements by state; it was then standardized to a per person basis by state. The year 1989 was selected for analysis since that year coincided with only the initial stages of the significant economic downturn that gripped the entire New England region.

Table 2: Non-Labor Costs--Infrastructure

The set of comparative competitiveness indicators employed in this analysis involves physical infrastructure. Almost without exception, surveys of business people and politicians point to concern about the deteriorating condition of the state's basic infrastructure, including

its system of roads and bridges, wastewater treatment, etc.

This concern is underpinned by a number of studies that conclude that such facilities make important contributions to state and regional economies. The problem with underinvestment or quality deterioration is that eventually poor infrastructure affects people and businesses. It is an issue reflective of the age-old "penny-wise, pound-foolish" adage.

For this analysis, the goal is to develop an assessment of relative competitive standing for the Vermont economy's existing "hard assets capacity" in several key infrastructure areas, such as roads, bridges, and wastewater treatment capacity. These indicators reflect a mix of financial need and quality criteria. Each area could conceivably have a significant growth facilitating or inhibiting impact on Vermont's future if improvements on the status quo are not achieved.

Table 2 shows that Vermont scores relatively poorly in the majority of infrastructure indicators. In four of the six indicators, Vermont ranks in the bottom half of its competition. With the exception of federal highway grants per person, where the state ranks 3rd among its key competitors and 10th overall nationally, Vermont ranks no higher than 8th (of 16) in any of the other infrastructure indicators.

Particularly disturbing is Vermont's exceptionally poor ranking in state and local general expenditures per person for air transportation (13th among Vermont's key competitors and 42nd nationally). Recently, Vermont has suffered a disturbing decline in jet service and has experienced a reduction in the number of seats on flights to several air service "hubs." The result is reduced access to several key national markets for Vermont business travellers. While these reductions are understandable given the need for financially strapped airlines to cut costs, this trend is potentially very harmful to Vermont's competitiveness if better access is not restored.

1. Federal highway grants per person (1990).

As a rural state with little mass transportation, Vermont's road and highway system plays a critical role in determining the state's economic fortunes. This indicator, which is reflective of the degree of federal financial assistance for a state's federal highway system, provides some insight into the prospective level of financial resource commitments necessary to maintain or perhaps enhance the quality of a state's federal highway system in the long-range future. Nationally, the federal government accounts for about 25 percent⁸ of all state receipts dedicated to highway transportation systems.

Vermont scores well in this cost-sharing indicator, ranking 3rd best among its key competitors and the Province of Quebec and 10th best nationally. However, this indicator is

⁸ At least in 1990.

the only indicator in this group where Vermont scores well.

2. Percentage of highway miles that are primary or better (1988).

From a competitive standpoint, the quality and capacity of a state or area's highway and road system is perhaps more important than the amount of spending per person or per mile. The condition of these "hard assets" is particularly important because most goods are transported by truck in to and out of the state. In addition, the state's infrastructure condition is also vitally important for supporting its tourism industry.

While there really is not any uniform measure of road quality, the percentage of a state's system that are primary or interstate roads is often viewed as a measure of quality and capacity. Primary or interstate roadways are generally the roads that are in the "best" condition and they also are thought to have the largest capacity for handling traffic. Often, these roadways are the most heavily used roadways in an area.

Table 2 shows that Vermont ranked 8th best among its 16 key competitors and 18th best nationally in this infrastructure quality criterion. Considering Vermont's rural character and the paramount importance of good roads to its economy, this position is one that could and should be improved upon.

3. Percentage of federal highway bridges that are "deficient" (as of June 1989).

In addition to the two above, another frequently used indicator of land transportation infrastructure quality is the present condition of the national system of bridges. In fact, despite the expenditure of billions of dollars on the national system of highways and roads, the deterioration of the national bridge system has recently become a critical problem.

The primary indicator of relative infrastructure quality for an area's bridge system is the percentage of a political jurisdiction's bridges in the federal highway system that are either structurally deficient or functionally obsolete. The U.S. government periodically completes surveys of bridge condition in all states.

In June 1989, 19.5 percent of Vermont's bridges were deficient. That composite condition of the state's bridges ranked Vermont 11th best among its 16 key competitors and 27th best nationally. Vermont fared poorly relative to its key competitors and was only in the middle of the pack nationally in this important indicator of infrastructure quality.

⁹ It should be noted that the emphasis on federal highway expenditures through the years has been on the construction of new roads and not on the maintenance of what has been built.

4. Federal highway expenditures per federal highway mile (1990).

Related to indicator #1 above, another way to measure the relative cost burden of a state or political jurisdiction's highway system is federal highway grants per mile. It is another way of standardizing the level of federal support for highways.

However, it is an important refinement for rural, more sparsely populated states. In small states like Vermont, a per person ranking may be higher simply because of its small population base, but its per mile ranking may be lower because of the greater number of road miles per person. Table 2 confirms that this is the case.

5. Wastewater treatment needs in dollars (1988).

A fifth area of infrastructure competitiveness addresses the very important and growing wastewater treatment capacity issue.¹⁰ Without adequate wastewater treatment capacity, existing businesses can be restrained and potential new businesses must look elsewhere for their sites.

The statistic employed in this analysis corresponds to a 1988 study by the U.S. Environmental Protection Agency relating to the prospective wastewater treatment needs of all 50 states and the dollar amounts associated with that level of need in the year 2008. This indicator is therefore intended to reflect potential cost burdens for the states associated with this increasingly important infrastructure item.

Table 2 shows that, at \$375 per person, Vermont ranks 9th best among its key competitors and 37th best nationally in this future infrastructure cost burden indicator. Given that one of Vermont's key competitive advantages is its environmental quality, this represents a potentially significant infrastructure cost to all Vermonters.

6. Percent of Telephone Lines Served By Digital Switching (1992).

The final area of infrastructure competitiveness concerns the relative quality of a state or area's telecommunications infrastructure. An area's access to sophisticated, low-cost telecommunications services is increasingly important in today's blossoming information age.

The key to affordable, more reliable, and sophisticated telecommunications services is digital switching. This capacity is a faster, more reliable, and cheaper technology than analog switching. It also enables the application of more advanced technologies such as I.S.D.N. (Integrated Services Digital Networking). From a practical standpoint, it provides for advances such as high speed data transfer and facsimile, video conferencing, video data base

For a more complete assessment of Vermont's wastewater systems and needs, see a copy of the Vermont Business Roundtable's <u>Cleaner Water for the 21st Century: Environmental and Economic Wastewater Imperatives</u>, 1991.

transfer, and for basic entertainment video (e.g., cable TV).

From the Table, Vermont still ranked relatively high (3rd best nationally and best among its key competitors) in the percentage of its telephone lines with access to digital switching. Although this position has been helpful to Vermont in the past, other states are making significant strides in catching up, and in some cases, 11 passing Vermont by in terms of commitment and investment. A narrowing in Vermont's relatively large past advantage would be expected as other states follow the early pioneers. However, given the rising competitive importance of telecommunications and the speed in which technology is changing, Vermont's current policy impasse in telecommunications has significant implications for the state's future competitive standing.

Table 3: Non-Labor Costs--Energy

One of the more basic and important costs of doing business in Vermont and the entire New England region is the cost of energy. Because of the relative scarcity of supplies of basic fuels in all of the New England states, the entire region ranks poorly relative to other regions of the U.S. in terms of its energy cost competitiveness.

The following broad indicators are intended to provide a general sense of Vermont's energy cost competitiveness vis-a-vis the rest of the United States for both its residents and its commercial and industrial sectors. The overriding conclusion from these indicators is that, with the exception of the percentage of its electricity generated from oil, Vermont ranks very poorly from the standpoint of energy cost competitiveness. This certainly represents an area for potential improvement in the future.

1. Percentage of electrical energy generated from oil (1991).

Given the historically volatile and generally "high" price of fossil fuels over the last two decades, a high dependence on oil for electrical energy generation is thought to be a competitive weakness. The weakness of this reliance becomes somewhat more harmful in light of proposals to impose gas and other energy taxes in the on-going effort to reduce the federal budget deficit and to encourage energy conservation.

The indicator presented in Table 3 for the competitor states is based on an analysis for calendar year 1991 from Regional Financial Associates¹² of West Chester, Pennsylvania. It represents the estimated percentage of a state's electricity generation that comes from oil; a

For instance, in the state of Maine, the number of lines served by digital switching today exceeds Vermont.

¹² A major U.S. economic forecasting concern.

low percentage of electricity generated from oil is preferred.

Vermont ranks 4th best among its key competitors (including Quebec) and 7th best nationally in this potential future energy cost indicator. No doubt, Vermont's reliance on hydropower and nuclear energy accounts for this generally preferred energy cost position. However, given the present level of public contentiousness over Canadian hydropower, instate hydro-generation, and the future of nuclear power, Vermont's preferred position in this area may erode in the future.

2. Average commercial prices for natural gas--\$ per million BTUs (1988).

Natural gas, particularly from Canada, is an important energy source for Vermont. Since average commercial rates for natural gas are generally lower than for many other fuel sources, one way Vermont commercial businesses have reduced fuel costs is by switching to this energy source.

Table 2 shows that Vermont's average commercial gas rates rank in the middle among its key competitors (including Quebec) and 29th best nationally reflecting lower than average costs for natural gas. Although this is not an enviable position, it does represent a competitive fuel cost level for a state that is otherwise not very competitive in this area.

3. and 4. Average commercial and industrial prices for fuels and electricity--\$ per million BTUs (1988).

The final two statistics in this energy cost section reflect the average weighted energy cost in dollars per million BTUs for energy consumed by each sector. At \$13.40 and \$8.89 per million BTUs for commercial and industrial energy use respectively, Vermont has among the poorest relative rankings (reflecting high fuel costs) compared to its key competitors and all of the states in the nation in each category.

This represents an area where Vermont's competitiveness could be substantially improved. This is particularly true given the fact that several key industries in Vermont-including its largest industrial category and the industrial category that has exhibited the greatest job growth over the last five years--are large energy users per employee. It also is crucial as Vermont's economy becomes even more technology intensive.

Table 4: Human Resources Quality

Perhaps an area's greatest economic asset is the quality and productivity of its labor force. After all, economic development and performance is a human endeavor. Vermonters-skilled, hard-working, and innovative--represent the state's economic building blocks. They are the structure of its economy.

This important area of our analysis includes indicators that are intended to examine statistics that provide insight into the general "quality" of each competitor area's labor force or human capital. Although it should be acknowledged that there is no real direct method to objectively evaluate the quality of labor force or human capital, the following indicators at least indirectly provide intuitive information about the relative quality of Vermont's labor force versus the other states' or areas' human capital bases.

The quality of Vermont's human capital resource is high in comparison with both its key competitors and the nation as a whole. The labor force appears to be productive and well educated. The public sector in Vermont also appears to have made a "good" educational system at all levels a priority by virtue of its strong financial commitment.

This is very important for an economy such as Vermont's where applying technology and knowledge to the production process is a critically important part of its competitiveness. With the pace of technological advancement and applications accelerating, maintaining and improving this edge is crucial to building a lasting competitive structure in Vermont's economy.

1. State and local government expenditures for elementary and secondary education per pupil (1991-92).

The first indicator in this grouping represents the commitment by state (or provincial) and local governments to increasing the basic skills level of their workforce through elementary and secondary education. Increasing workplace complexity and the growing need for a well-trained workforce make it very important to maintain and enhance the skills level of the workforce to assure a lasting competitive edge.

This first column on Table 4 shows per pupil general expenditures by state and local governments for elementary and secondary education during the 1991-92 school year. Vermont ranks 3rd best among its key competitors (including Quebec) and 5th best nationally. Only Connecticut and New York spend more state and local dollars per pupil than does Vermont. Such a strong commitment is critical for maintaining one of Vermont's key competitive advantages in the global marketplace.

2. Education Quotient--an experimental indicator of elementary and secondary school quality.¹³

Simply spending the highest (or one of the highest) sums of public resources per pupil is not enough to assure that a state or area has good schools. The level of governmental financial commitment is only part of the equation. This financial commitment approach

For a more complete explanation of the "education quotient" as an indicator, see <u>Expansion Management Magazine</u>, September/October 1992, pp. 14-24.

should be supplemented by some quality or results-oriented yardstick that measures elementary and secondary school quality.

State-by-state or area-by-area performance statistics unfortunately do not exist to allow for such quality comparisons. However, for the purposes of this analysis we include a new statistic that was recently published by <u>Expansion Management Magazine</u>, which evaluates selected school districts on the basis of eight performance criteria.¹⁴

Although this is not a perfect evaluative statistic and the publication does not rank all of the school districts in each state, it does provide a reasonable look into the issue of quality. The score calculated on Table 4 reflects the mean of all of the calculated "Education Quotient" statistics published for the local school districts evaluated for a particular state.

Vermont appears to have good schools¹⁵, but its ranking is not as good as its high expenditure level would suggest it should be. While the point is not to suggest that Vermont's schools are "overly" expensive versus the results, it does suggest that there is room for some improvement in quality. This is true, particularly if Vermont is to maintain its competitive edge in this important area in which it can perhaps best compete.

3. State and local appropriations for public higher education as a percent of total appropriations (1990-91).

A state or area's commitment to elementary and secondary education is only part of the equation. The importance of encouraging students to continue their education at the post-secondary level is also becoming more important in today's economy where knowledge itself is increasingly being traded as a commodity.

One way to gauge a state or area's commitment to higher education (for its workforce quality or as an economic contributor as a dollar-importing industry itself) is through the appropriation levels per full-time equivalent student at public higher education institutions. The statistic presented on Table 4 shows that Vermont does not score well in this area. This is true relative to both its key competitors (at 15th best of its 17 key competitors including Quebec) and the nation as a whole (at 48th best).

This is a surprising statistic in that such training is crucial for maintaining a competitive edge for Vermont's workforce. It also is surprising because higher education makes important economic contributions as an industry to both Vermont and the entire New England region.

¹⁴ Including high school graduation rates, average SAT or ACT scores, per pupil expenditures for instruction only, average classroom teacher's salary, student-to-teacher and student-to-counselor ratios.

¹⁵ This statistic is admittedly an incomplete assessment of quality.

4. Percentage of the population that has completed 4+ years of college (1990).

Another way to evaluate workforce quality is by measuring the percentage of the population of a state that has completed at least four years of college. As mentioned previously, the higher the educational attainment of an area's population, the greater its ability to compete.

For this analysis data were obtained in the 1990 census for Vermonters over 25 years of age that have completed at least four years of college. Table 4 shows that Vermont ranks high, both among its key competitors (4th best of 16) and nationally (8th best) in this statistic. That position bodes well for the workforce's future competitiveness. It is a position we should strive to maintain.

5. Value added per manufacturing employee (1989).

The final statistic on Table 4 concerns an indicator of how well a state or area's workforce applies its knowledge and skills to the manufacturing production process. Although it is not a precise measure of this application (industry composition and technology intensiveness also play key roles here), it provides at least some insight in to how well the state's apparently well-equipped labor force performs in adding value to the goods-producing process.

This value-added statistic is very important for Vermont and a region like New England that must compete to offset natural cost disadvantages. Adding a high level of value to the production process is absolutely critical to maintaining the economy's ability to pay increasing wages to the workers it employs.

Vermont ranks 2nd best among its key competitors and 16th best among the 50 states in this important indicator. This ranking suggests that Vermont's manufacturing base is very competitive; it must remain so if it is to effectively compete in the increasingly global economy.

Table 5: Labor Cost Criteria

This section of the competitiveness analysis includes several statistics that correspond to the direct cost of each state's labor force. It attempts to compare the cost of Vermont's labor force with the other states and areas included in this analysis.

For the labor cost indicators selected, Vermont scores well on some (unionization rate, workers' compensation payroll tax burden, average hourly earnings in manufacturing); is average on others (the unemployment rate); and fares poorly on others (unemployment insurance compensation burden and growth in average pay). This analysis evaluates these

indicators from the standpoint of the employer. For example, a relatively low earnings level would be a "plus" from the labor force cost perspective, even if this results in a lower income level for a Vermont resident.

1. Unemployment rate (1992 or latest year).

The unemployment rate is an inverse indicator of labor force cost. A low unemployment rate suggests "tight" labor markets that ultimately put upward pressure on wage rates. That makes a low unemployment rate a competitive negative from a labor force cost perspective.

Conversely, a high unemployment rate suggests that there is some "slack" or unused capacity in a state's labor force, and there is therefore significantly less upward demand pressure on wage rates. That makes a relatively higher unemployment rate a competitive positive from a labor force cost perspective. A state or area with a higher unemployment rate would be preferred.

Vermont's 6.6 percent unemployment rate for 1992 ranks near the average of both the key competitor states group (9th best of 17 key competitors including Quebec) and for the nation as a whole (28th best). This analysis says that Vermont's employment/unemployment situation is essentially neutral from a labor force cost competitiveness perspective.

2. Average hourly earnings of manufacturing production workers (1990).

A second direct cost indicator is the relative cost per hour of manufacturing production workers in Vermont versus its competitors. While it should be acknowledged that cost is a relative term in dollars paid per worker relative to the productivity of that worker, this gauge is still used frequently as a measure of direct business cost for manufacturing labor.

The affordability of Vermont's manufacturing workforce ranks high both among its key competitors (4th best among its 17 key competitors including Quebec) and nationally (12th best). Maintaining this competitive advantage while still improving the standard of living of Vermont workers is the challenge for the 1990s and beyond.

3. Percent change in average annual pay (1985-88).

A "point-in-time" reading generally does not tell the complete story about a state's direct labor force costs. That is why a trend indicator is often used to complement such a snapshot wage or pay level statistic. Such a trend indicator would be used to show the direction in which one of the main components of direct labor costs is moving over time.

¹⁶ It should be noted that labor force cost is a function of both monetary cost and output productivity.

Table 5 includes a comparison of the change in average annual pay in each state for workers covered under each state's unemployment insurance law.

Despite coinciding with the initial three years of Vermont's now eight-year manufacturing employment decline, the state still ranks low relative to its key competitors (11th best of 16) and in comparison to the nation as a whole (41st best). No doubt, the very difficult economic circumstances that have gripped Vermont over the intervening four years have brought this back into better alignment. However, it does suggest that upward wage and earnings exposure may be high in Vermont should stronger economic circumstances materialize during the 1990s.

4. Average employer contribution to unemployment insurance as a percent of total wage compensation (1989 or comparable year).

Wages do not represent the full range of labor costs to Vermont employers. Indirect costs such as fringe benefits, unemployment compensation taxes, and workers' compensation premiums represent real and significant labor costs for employers. While state-specific data for fringe benefits do not exist, data are published for employer tax contributions for unemployment compensation.

In terms of employer contribution as a percent of total wages earned by those covered by unemployment insurance, Vermont fares poorly both relative to its key competitors (12th best of 16) and vis-a-vis the other 49 states in the nation (41st best). This indicator suggests that progress could be made to reduce this important and significant indirect cost factor for Vermont's labor force.

Such costs are becoming even more significant as formerly highly paid manufacturing workers join the ranks of the long-term unemployed due to the ongoing structural changes underway in Vermont's economy. For employers, the potential cost implications of these economic changes are also increasing on the federal level as the U.S. Congress continues to extend federal unemployment insurance benefits for the long-term unemployed.

5. Average weekly unemployment insurance benefit as a percent of average weekly wages (1989).

Another way to measure the costs of this program is to compare benefits with the state's average wage compensation. If average benefits paid are high in relation to wages, then a state's benefit levels could be categorized as "high" and relatively less competitive. If, on the other hand, a state's average benefit level as a percent of wages is relatively low, this could be viewed as a relative positive from a cost competitive standpoint.

The statistic employed in this analysis involves the average weekly benefit paid in relation (as a percent in this case) to average weekly wages paid to those covered by the program in 1989. Vermont ranks in the middle among its competitors (tied for 7th best of

16) and for the nation as a whole (tied for 25th best) in this indirect labor cost indicator. While employers tend to pay a bit more in Vermont to support the program, benefit levels do not appear to be out of line with average benefit amounts received by unemployed Vermonters.

6. Workers' compensation insurance burden per \$100 of payroll (1991).

The Workers' Compensation program in many states has received considerable attention as costs have risen dramatically in the past few years. Increases in the cost of medical care and apparent increases in the number and duration of claims under the program have received the most scrutiny.

This analysis recognizes that the Workers' Compensation program is a significant part of total labor costs. Vermont ranked somewhat above average in the workers' compensation insurance burden per \$100 of payroll in 1991 for both the key competitor sub-group (6th best of 16) and for the nation as a whole (16th best).

However, given the recent trends in this program in other states, reforms cannot be ignored in Vermont if we are to keep this program under control and keep these burdens a relative advantage. Vermont's problems and cost increases do not yet approach those in other states (e.g., Maine), but it would be shortsighted to wait for them to reach those dimensions before acting. This is especially true when many of the structural factors behind the other states' problems are growing right here in Vermont.

7. Percent of the manufacturing labor force that is unionized (1991).

This final indicator here is the level of unionization of Vermont's manufacturing workforce. Conventional wisdom among employers regarding labor force costs suggests that the higher the percentage of a state's workforce that is unionized, the higher the cost of that state's workforce. This view holds that more highly unionized workforces generally receive more costly pay and benefit packages (from the employer's standpoint), and are more prone to work stoppages or labor disputes.

Whether that assessment is substantially correct or incorrect is irrelevant to employers and how they view the cost competitiveness of a state's labor force. The perception is that a lower rate of unionization is preferred and a higher rate of unionization is less desirable.

Vermont ranks high among both its key competitors (3rd best of 16 in both categories) and nationally (7th best in durables sectors and 4th best in non-durables industries). Its low union membership rate in manufacturing is often said to be a small competitive advantage.

Table 6: Tax Burden/Cost Criteria

This area of investigation involves a competitiveness analysis of public sector financial activities. Through the years, it has been shown that public sector taxing and spending decisions can have an important effect on the cost structure of the businesses in their area or jurisdiction.

Although governments do not compete directly in the economy in the traditional sense, they do have a significant impact on: (1) establishing the rules of the competitive game; (2) key parts of the fundamental costs that a business must pay to operate and compete; and (3) public or publicly assisted programs to facilitate a supportive environment for job and income growth.

The indicators in Table 6 deal exclusively with fiscal cost burden issues. They include relative cost burden data both from the context of business costs and costs to individuals who may choose to live in those jurisdictions. The indicators in Table 6 attempt, however inadequately, to capture some of the key public sector cost issues that may come into play in the competitiveness equation.

Vermont ranks poorly in its various tax and expenditure burden ratings, ranking in the lower half--and many times near the bottom--among Vermont's key competitors and for the nation as a whole because of its high tax rates and expenditure burdens. Vermont also ranks below average on the two maximum tax rate criteria for personal and corporate income taxes, and near the bottom in the size of its public employment base. The only indicator where Vermont fares better than average involves the level of the state and local tax level per \$1,000 of income from income taxes.

1. State and local government expenditures per increment of personal income (1991).

One method of assessing the relative burden of a state or area's public sector is to compare direct expenditure levels per \$1,000 increment of personal income (representing a capacity to pay). In public finance, various forms of deficit spending¹⁷ and debt financing have recently been undertaken to support current spending, therefore total expenditures level per person for both state and local governments may be a better indicator of the true cost burden of any state's fiscal program on its residents and businesses than any other public finance indicator.

The indicator used in this analysis, total direct expenditures by state and local governments for the 1990-91 fiscal year, shows that Vermont ranked near the bottom both among its competitor states (9th best of 16) and nationally (33rd best). This suggests that Vermont's public sector is somewhat expensive relative to its competitors; care needs to be

¹⁷ In many cases, despite constitutional prohibitions against it.

exercised in disciplining and controlling its size and activities to the greatest extent possible for competitiveness reasons.

2. "Own source" state and local revenues per increment of personal income (1991).

A second way to measure fiscal program cost burdens is by the current "tax-take" and other "fees" collected by state and local governments versus some measure of ability to pay. The statistic identified as best for this competitiveness analysis was state and local revenues per \$1,000 of personal income from the state's "own sources" for fiscal 1990-91.

The "own sources" distinction refers only to those revenues collected from the state's own state and local government revenue sources and is "net" of the sometimes substantial sums a state can receive from the federal government to carry out its activities. It is a figure that is "net" of revenues received from other levels of government--principally involving intergovernmental transfers of monies through various programs from the federal government.

The table suggests that Vermont again ranks poorly in comparison to its key competitors (13th best of 16) and relative to the nation as a whole (42nd best) because of its relatively higher tax rates. This statistic suggests that while the federal government provides some degree of financial assistance to the state and local levels of government in Vermont, state residents and businesses still shoulder a high level of tax burden in support of their public programs. This status should be carefully considered in state and local fiscal policy decisions if Vermont is to remain competitive.

3. Income (personal and corporate) taxes per increment of personal income (1990).

In most political jurisdictions, income taxes--either from corporations or individuals-are the largest sources of revenue for all levels of government. Their importance as a funding resource merits closer examination.

The statistic employed in this analysis is state and local income taxes (corporate and personal) per \$1,000 of personal income. These statistics cover the 1990 fiscal period for all states. Vermont ranks better among its key competitors (6th best of 16) than it does for the country as a whole (28th best). However, closer examination of the data shows that Vermont's income tax burden level simply reflects the "best" of a group of states that are taxed to a relatively high degree compared to the rest of the country. Aside from the five key competitor states that have essentially no state personal income tax, Vermont's closest burden neighbor ranks 31st nationally, and 7 of the sixteen states in its key competitor list rank in the 40s or higher when compared to states across the nation.

4. Maximum state personal income tax rate (1992).

From the standpoint of interstate or interregional competition, the maximum tax rate

on individual income is thought of as a signal of relative friendliness on the part of state and local governments toward the business community. In addition, the maximum tax rate at times is viewed as an important indication of how chief executives may view their own financial circumstances when living and working in a particular area based on their own individual financial circumstances.

The statistic utilized in this competitiveness analysis is the maximum tax rate levied on the highest income class in a particular state or area in 1992. Vermont is shown to have had the 2nd highest (or worst) top marginal income tax rate among its key competitors and the 2nd highest (or worst) top marginal rate in the entire country last year. Although this rate is likely to "sunset" as of December 31, 1993, such a distinction is not a desirable position from a competitiveness standpoint.

5. Maximum state corporate income tax rate (1992).

Another indicator that is symbolic of state and local governmental attitude toward business involves the maximum tax rate on corporate income. This is often viewed--correctly or incorrectly--as the relative level of penalty assessed on business success.

The underlying assumption is that this indicator has implications for product and/or service prices¹⁸ and how much of a competitive handicap a company's product and/or service offerings may suffer in an increasingly competitive global market place. In addition, some executives may view a higher than average tax rate as presenting roadblocks to their company's efforts to raise funds to modernize and stay ahead of the competition.

The indicator used in this analysis is the maximum tax rate assessed on the highest taxable income class in 1992. Vermont ranks below average both relative to the key competitors (10th best of 16) and relative to the nation (34th best).

6. State and local government employment per increment of population (1991).

The final public sector cost burden statistic involves the number of public sector employees in a political jurisdiction relative to some relevant increment of population. This statistic is not intended to gauge the efficiency of a state's government or public workforce, although efficiency does have an impact on public employment levels. ¹⁹ It simply attempts to present another non-monetary measure of the relative size and burden of a state's public sector.

¹⁸ Taxes on business should be viewed as a business cost, which over the long-run will need to be internalized into the price of a company's product or service if the company is to survive as a going concern.

¹⁹ It should be noted that public employment levels are also a function of: (1) collective decisions in a state or area with respect to service levels, (2) population density, and (3) other factors such as governmental organization.

However, the implicit assumption in this analysis is that relatively higher public employment levels versus a standard increment of population are more costly to support. Because it is a level statistic (instead of a "quality" statistic), it is silent as to the efficacy or worth of the public workforce's cost. It merely shows that the cost of a public workforce is generally higher or lower in a relative sense based on the population base available to support it.

The statistic used in this analysis is state and local government employees (includes both full- and part-time jobs) per 10,000 of population for fiscal year 1990-91. Vermont is shown to have a relatively large public sector from the standpoint of number of employees. The state ranked poorly (10th best of 16) among its key competitors and 30th best compared to the rest of the nation. Although a large public sector workforce may be a natural condition for a small, rural state such as Vermont, policymakers should bear this in mind when making programmatic decisions that have implications for the number of employees needed to implement those decisions.

Table 7: Social Policy Indicators

Table 7 reflects a small sample of social policy indicators that could be used to provide some insight into the collective attitudes of state populations on several key social policy areas of importance to economic competitiveness and development. The issues covered in this table range from health care and environmental policy to economic development and travel and tourism. While it is very difficult to find reliable and objective indicators that are adequate to cover all of the broad aspects and issues of social policy, the indicators in Table 7 can be helpful in providing some insight into the collective views of the populations studied.

Vermonters place a premium on protecting their environment and on making sure that their population has adequate health insurance coverage. In addition, it does not seem that Vermonters place as much emphasis on promoting economic development or tourism-perhaps thinking they must simply take care of themselves. Although those attitudes may have changed or are changing, given the dramatic economic weakness of the 1989-93 period, clearly more attention needs to be paid to economic issues as the state's economy emerges from its four-year economic slumber.

1. Percentage of the population without health insurance (1988).

One important indicator of future public sector cost burden is embodied in the relative demand on public resources that will be required to insure the uninsured after health care reform. Clearly, the cost burdens under reform will be felt by individuals and businesses in those states that have the largest uninsured population.

Although efficiency gains and cost savings will also come into play, the resources required to cover the uninsured will be substantial as the uninsured population eventually comes under a basic universal health care services package. The assumption in this analysisalthough not infallible due to the efficiency gains and cost-savings factors mentioned aboveis that the higher the percentage of a state's population that is uninsured, the higher the potential future cost burden for a state.

The indicator utilized is the percentage of a state's non-elderly population lacking health insurance through private or public carriers or Medicaid for 1988 as reported by the Employee Benefit Research Institute. This statistic was recently reported by the Institute for Southern Studies in its most recent Green Index publication.

Vermont ranks near the top of the list of its key competitor states (5th best of 16) in terms of the lowest percentage of its population that lacks health insurance. Although it remains unclear how greater efficiency in the delivery of services will affect Vermont's relative cost burden under health care reform (state and/or federal), Vermont may fare somewhat better than the national average, given cost implications suggested by this statistic.

2. Commitment to Environmental Programs (1988).

Virtually all states suggest that a superior quality of life is one of their main competitive advantages. For states which depend heavily on their image of having a clean environment (e.g., states which rely heavily on their tourism sector), it would be expected that those states would have a strong commitment to their environmental and natural resource protection programs.

Because it is difficult to measure the effectiveness of and accountability in environmental and resource protection programs, one measure of a state's environmental commitment is the relative amount of resources a state government earmarks for such programs. The indicator employed in this analysis is the level of state government expenditure on environmental and natural resource programs per person in each state.

From the table, Vermont has a superior ranking (5th strongest among its key competitors and 13th strongest nationally) in the per person level of state spending on environmental and natural resource protection programs. This is not a surprising development considering Vermont's hard-earned, "environmentally clean" image. This perception is important to both Vermont's travel and tourism industry and the hard-fought, favorable image associated with the "Seal of Quality" program for Vermont-made food products.

3. Commitment to tourism (1992).²⁰

It is now being acknowledged in Vermont that the travel and tourism industry is an increasingly important component of the state economy. There is no perfect, single indicator to reflect the collective attitude of a state toward its travel and tourism industry. However, one way to assess a state's attitude toward tourism is to review the salary level of the top tourism official (from the standpoint of attracting strong leadership to the position) as a percentage of the salary earned by the Governor (to standardize for cost of living differences).

While this indicator has obvious shortcomings, it does show that Vermont historically ranked relatively poorly in this indicator (having the poorest ranking among Vermont's key competitors and the second poorest relative salary level among the 50 states), especially with respect to the apparent importance of this sector to the Vermont economy (see Table 7--Receipts from Tourism). While that relative rank will no doubt improve as statistics are reported that reflect a re-classification of Vermont's top travel position's ranking to full Commissioner, Vermont had virtually no way to go than up in this symbolic indicator.

4. Commitment to economic development (1992).

Economic development is a broad term that encompasses many complex topics, ranging from fiscal policies and business stimulus policies to regulatory policy. One way to gauge attitudes toward economic development in a state is to evaluate the emphasis the state's government places on attracting strong leadership to its top economic development position through salaried compensation. That is, weighted against all of the other budgetary decisions, the level of compensation, expressed as a percentage of the Governor's pay, can provide an important signal of pro- or anti-development attitude in an area.²¹

While this indicator also has shortcomings, it does show that Vermont has historically ranked poorly in this indicator (11th strongest among 16 key competitors and 37th strongest nationally). Vermont has substantial room to move upward in this symbolic indicator.

5. Business incorporation rate per 100,000 population (1990).

Since economic development and job creation are largely based on the establishment

The information used in this analysis came from a January 1992 salary survey prepared by the U.S. Council of State Governments. The survey was taken before Vermont elevated its "top" tourism official's position in state government to the commissioner level.

The indicator used in this analysis was also taken from the January 1992 salary survey by the U.S. Council of State Governments. However, unlike the tourism salary analysis, no organizational change was made in this position since the survey.

and subsequent growth and expansion of businesses in a state or area, one tangible measure of economic development policy success is a relative ranking of new business incorporation. While this indicator is sensitive to economic conditions, it can over a period of years reflect the relative success or failure of a state or area in cultivating an economic development climate that is viewed as supportive of business birth, profit-making, and growth.

The indicator employed in this part of the competitiveness analysis was the number of new firms incorporating per 100,000 of population. The basic business incorporation data were obtained from Regional Financial Associates and the number of new business incorporations was standardized for comparison by 100,000 increment of population.

Vermont ranks somewhat poorer than average both for the list of key competitors (12th best of 16) and nationally (36th best). However, this relative ranking appears to be improving as conditions in the Vermont economy appear to be slowly "on the mend."

Table 8: Life Quality Criteria

The final area of this competitiveness investigation concerns selected indicators intended to measure the abstract concept of "life quality." For this section, we rely on five fairly broad indicators of quality of life; these statistics range from the subjective to the very specific.

If the previous section dealing with social policy indicators suffered from shortcomings of completeness and appropriateness, this final section of our analysis has similar faults. However, indicators, appropriate or not, are the ones that are frequently reviewed by business officials when evaluating the amenities the state offers as a place to conduct, expand, or contract business operations.

Vermont enjoys significant advantages relative to both its key competitors and the rest of the nation in all selected indicators except for the "disposable personal income" and "percentage of possible sunshine" statistics. In fact, Vermont had the lowest violent crime rate among its key competitors (ranking 3rd lowest in the nation), and the state ranked high or at least "above average" in the composite fun and life quality score criterion and the percentage of persons living below the poverty level.

From a policy standpoint, these rankings reflect positions to be defended vigorously. Additional progress could be made in the area of increasing disposable personal income (by encouraging higher-paying industries and reducing tax burdens). There is little that can be done to address weather conditions!

1. Composite fun and life quality index (1991-92).

The first indicator involves the broad area of fun and quality of life. This is an allencompassing notion that takes into account many aspects of life not easily quantified and ranked through any single measure.

The Institute for Southern Studies periodically publishes a widely respected "Green Index" analysis, which includes several state-by-state rankings relating to aspects of "fun" and "life quality." Their 1991-92 publication contains a composite index that attempts to gauge a state's fun and quality of life quantitatively in a single score using a total of 21 individual indicators. These indicators range from statistics such as population density and miles of coast line to the percentage of state lands in state parks and the number of motor boat registrations in a state.

Using this composite score approach, Vermont ranks high among both its key competitors (5th best of 16) and the nation (12th best). As the amenities value of economic competitiveness grows, this position will continue to serve Vermont well. However, difficult policy decisions lie ahead as how best to assure this favorable ranking is preserved.

2. Violent crime rate per increment of population (1989).

Another important indicator of life quality is the level of crime in a state or area. For this, the number of violent crimes²² per 100,000 increment of population was used to indicate the relative safety of a state or area as reported by the U.S. Federal Bureau of Investigation. Although there are urban/rural differences that complicate state-by-state (and provincial) comparisons, a low crime rate per 100,000 population was considered a plus in this analysis.

Vermont enjoys one of the most enviable relative rankings among the entire country. Vermont ranked 1st (or best) among its key competitors (including Quebec) and 3rd best among all 50 states in terms of its violent crime rate per 100,000 population in 1989. Although protecting this position will become more problematic as the state grows, the relatively low violent crime rate is certainly a competitive plus for Vermont today.

3. Disposable personal income in dollars per person (1992).

One of the most important tangible indicators of life quality in any state or area involves the level of after-tax income available for consumption and other uses by a state or area's population. Income provides individuals with the wherewithal to consume the products and services they choose and provides them with the resources to "enjoy" life.

These figures represent crimes reported to police; they include offenses such as murder, forcible rape, robbery, and aggravated assault.

Implicit in this competitiveness analysis is that higher income per person generally means better life quality. Lower income per person implies that one's life quality is worse than others'.

Vermont ranked in the middle of the pack in disposable personal income per person in 1992: the state ranked 9th highest among the 16 competitor states and 25th highest among the 50 states. However, this ranking is somewhat disappointing given that Vermont is located in the relatively high-income region of the northeastern United States.

Conventional thinking in Vermont suggests that many Vermonters value the state's many non-income amenities very highly and they are willing to "accept" lower rates of remuneration for their labor in exchange for enjoying the benefits of those non-monetary amenities. While that may be true in many cases, similar non-monetary amenity arguments are frequently made in other low-income areas of the United States and may have only limited applications in the competitiveness equation.

4. Percent of population living below the poverty level (1990 or some comparable year).

Another fairly common indicator of life quality is the number of persons who are living below the government's definition of the poverty level. The fewer the number of persons living in poverty, the better the collective quality of life in a state or area.

Vermont again ranks right in the middle of the pack when it comes to the number of its residents living in poverty. While the national rank (16th highest) is encouraging, Vermont is only slightly better than average among its key competitors (6th highest of 16). As noted above, that position is somewhat disappointing when it is considered that Vermont is part of the higher-income northeastern section of the United States.

5. Percentage of possible days of sunshine for a state's major (or sunniest) city (1990).

The final quality of life indicator reflects a comparison of state or area weather conditions. While it is not possible to make such a generalization about temperature conditions (some enjoy warmer temperatures, while others prefer seasonal variations in temperatures), it is a plausible assumption that people generally prefer sunshine to overcast or rainy/snowy weather. Weather quality is thought to have a significant bearing on the relative life quality of a state or area.

This analysis uses a measure of the percentage of possible sunshine in a state or area's largest and/or sunniest metropolitan area as reported by the U.S. National Oceanic and Atmospheric Association for 1990. Vermont ranks very poorly in this indicator, both compared with the nation as a whole (45th sunniest) and among its 16 key competitors (14th sunniest of 16). Weather can be a limiting factor for certain types of endeavors and it should be recognized as such.

APPENDIX

Identifying Vermont's Key Competitors

One of the most challenging parts of this competitiveness analysis was developing the proper framework and context for assessing Vermont's competitive standing. The Economic Development Committee of the Vermont Business Roundtable began wrestling with this issue in the summer of 1992, forming a working group that was charged with making recommendations to the full committee regarding the identification of Vermont's competition.

The group began its task by first developing a list of factors by which to identify and then evaluate who and what represented Vermont's competition. These factors were identified and developed based on other similar studies in other states and on the findings of Part I and Part II of this series.

The working group, with the assistance of the full committee, first determined that the political jurisdictions bordering Vermont on all sides (New Hampshire, Massachusetts, New York, and Quebec) and two other states in the New England region (Maine and Connecticut) should be designated as key competitors given their geographic proximity. The working group then sought to narrow the list of Vermont's other competitors from the other 44 states through an evaluation that resulted in a competitiveness similarity score.

The process of calculating a competitiveness similarity score was both complex and subjective. It involved appropriately weighting Vermont's relative national rank for each of 23 sub-factors employed. The 23 sub-factors reflected a mixture of current and future-oriented comparative data to assure that this analysis had applicability in the future. A composite competitiveness similarity score was calculated using each state's national rank²³ for an indicator times the relative "weighting" or importance of each sub-factor to Vermont's competitiveness (as determined by the Vermont Business Roundtable Economic Development Committee).

Each state's composite score was totaled and all 50 states were ranked according to their composite competitiveness similarity score. These scores were then used as a basis for identifying a group of states that were likely to be Vermont's non-regional competitors. Ten additional states were identified: North Carolina, California, Washington, Oregon, Minnesota, Idaho, Florida, South Carolina, Tennessee, and Wisconsin.

Although Nevada, Texas, Arkansas, Georgia, Hawaii, and Alaska had composite competitiveness similarity scores that were to close to Vermont's, each was rejected because

For each sub-factor, all 50 states were ranked from 1 (representing the most desirable rank) to 50 (representing the least desirable rank).

of at least one overriding factor. For example, Hawaii was rejected based on the presumption that a land-locked northeastern state with its relatively harsh winters and a high percentage of its employment in manufacturing experienced little direct competition with an island, subtropical, light manufacturing state located several thousand miles away.²⁴ Other states, such as Georgia, were deleted from this list of key competitors because the regions in which they were located were thought to already have enough representation in this key competitor group. They were therefore excluded to avoid redundancy.

While other "excluding" factors also came into play in this selection process, the committee felt that the list of key competitors should be limited to fifteen or sixteen political jurisdictions, the maximum number that could practically be examined and still meet the time constraints allowed for this analysis.

²⁴ Even though the keen competitive aspects of the two states' captive insurance industry was acknowledged.

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Table 1: Non-Labor Costs--Financial Capital

State	Commercial & industrial loans loans <u>per worker [A]</u> (\$)	Commercial & industrial loans as percent of total loans [B] (%)	Capital as percent of assets [C] (%)	Venture capital per person [D] (\$)
California Connecticut Florida Idaho Maine Massachusetts Minnesota New Hampshire North Carolina North Carolina South Carolina Tennessee Vermont Washington (state)	5,220 (9) 4,160 (13) 2,570 (34) 3,130 (25) 2,280 (45) 7,850 (3) 4,970 (10) 2,550 (35) 4,450 (11) 19,40 (11) 19,90 (10) 2,950 (28) 3,290 (23) 3,180 (24)	29 (11) 28 (12) 17 (45) 26 (21) 37 (3) 37 (3) 37 (4) 20 (40) 39 (10) 39 (10) 35 (5) 16 (46) 24 (26) 21 (35) 20 (10)	4.43 (38) 5.00 (32) 4.30 (41) 5.77 (22) 7.24 (10) 6.18 (19) 6.18 (19) 7.04 (12) 7.04 (12) 7.44 (25) 6.44 (15) 6.44 (15) 8.38 (3) 8.09 (5)	4,186 (2) 2,416 (5) 412 (27) 323 (30) 802 (19) 5,297 (1) 1,874 (6) 881 (16) 298 (32) 690 (20) 578 (25) 650 (23) 1,144 (12) 1,233 (11) 67 (40)
	• • • • • • • • • • • • • • • • • • • •			

N.A. Denotes not available in a comparable form or for a comparable year.

Notes:

[A] Commercial and industrial loans outstanding per worker (as of June 30, 1990).
[B] Commercial and industrial loans outstanding as a percent of total loans outstanding (as of June 30, 1990).
[C] Capital as a percent of total assets (as of June 30, 1990).
[D] Venture capital per person (1989).

Basic data sources: Federal Deposit Insurance Corporation [A,B,C] and Corporation for Enterprise Development [D].

Table 2: Non-Labor Costs--Infrastructure

Percent of telephone lines with Digital Switching [F] (%)	39.6 (35) N.A. 50.3 (23) 28.8 (45) 25.6 (7) 56.2 (16) 47.9 (28) 69.2 (9) 78.8 (5) 61.3 (11) 39.8 (5) 62.0 (20) 55.0 (20) 32.4 (42)	N.A.
State and Local Gov't. Federal highway wastewater treatment expenditures [D] needs in 2008 [E] (\$/mile)	231 (21) 431 (42) 501 (45) 124 (8) 283 (28) 991 (50) 257 (24) 787 (49) 277 (26) 710 (48) 460 (43) 197 (17) 300 (32) 375 (37) 288 (29)	N.A.
S Federal highway w expenditures [D] (\$/mile)	31,665 (7) 71,507 (3) 25,929 (27) 15,472 (12) 11,332 (34) 16,933 (19) 9,667 (39) 16,893 (20) 20,641 (15) 24,187 (11) 10,162 (37) 9,954 (38) 17,997 (17) 14,841 (27) 23,128 (12) 8,542 (42)	N.A.
Percent of highways and bridges with deficiencies [C] (%)	7.4 (6) 24.5 (36) 4.0 (2) 14.2 (20) 17.2 (25) 33.8 (44) 14.9 (23) 18.8 (26) 6.3 (4) 60.9 (50) 8.1 (7) 9.8 (9) 22.2 (31) 13.7 (19) 29.5 (42)	N.A.
Percent of highway miles primary or better [B] (%)	6.92 (3) 6.46 (5) 6.57 (10) 4.02 (38) 6.00 (8) 7.84 (2) 3.74 (43) 4.97 (21) 5.14 (14) 5.14 (14) 6.07 (25) 4.07 (35) 4.56 (29)	N.A.
Per person federal highway grants [A] (\$)	45.2 (42) 119.2 (7) 37.0 (48) 125.2 (5) 53.9 (32) 30.1 (50) 64.1 (20) 50.2 (36) 58.2 (27) 33.6 (49) 55.9 (28) 46.1 (39) 55.5 (10) 97.4 (10) 45.3 (41)	81.2 () [G]
fe	California Connecticut Florida Idaho Massachusetts Minnesota New Hampshire North Carolina New York Oregon South Carolina Tennessee Vermont Washington (state)	Quebec

N.A. Denotes not available in a comparable form or for a comparable year.

Notes:

[A] Federal highway grants per person (1990). For Quebec, federal and provincial government grants were used (1990).
[B] Percentage of highway miles that are primary or better (1988).
[C] Percentages of federal highway miles that are deficient (as of June 30, 1989).
[D] Federal highway expenditures per federal highway mile (1990).
[E] Wastewater treatment needs in dollars per person in 2008.
[F] Reflects percentage of lines served by digital switching for the major carrier in each state in 1992.
[G] In Canadian dollars; 1992 Canada Year Book.

Basic data sources: Federal Highway Administration [A,B,C,D], <u>1992 Canada Year Book</u> [A], U.S. Environmental Protection Agency [E], and Federal Communications Commission [F].

Table 3: Non-Labor Costs--Energy

Avg. industrial fuel & electricity prices [D] (\$)	6.94 (43)	_	5.59 (27)	_	_	8.62 (47)	_	11.12 (50)	_	_	_	_	6.33 (39).	_	5.23 (23)	5.62 (28)	N.A.
Avg. commercial fuel & electricity prices [C] (\$)	_	12.77 (45)	_	8.64 (12)	9.25 (17)	_	_	11.31 (34)	_	_	_	_	9.29 (16)	13.40 (47)	7.92 (4)	9.06 (16)	N.A.
Avg. commercial natural gas prices [B] (\$)	5.17 (40)	5.45 (47)	4.62 (25)	4.55 (23)	6.25 (48)	5.41 (45)	4.21 (15)	5.43 (46)	4.98 (35)	_	5.37 (43)	5.34 (42)	4.22 (17)	_	4.61 (20)	4.52 (22)	5.99 () [E]
Electrical energy generated from oil [A]	0.6 (32)															0.1 (10)	1.1 ()
State	California	Connecticut	Florida	Idaho	Maine	Massachusetts	Minnesota	New Hampshire	North Carolina	New York	Oregon	South Carolina	Tennessee	Vermont	Washington (stat	Wisconsin	Quebec

N.A. Denotes not available in a comparable form or for a comparable year.

Notes:

[A] Percentage of electrical energy generated from oil (U.S. 1991, Quebec 1989).

[B] Average commercial prices for natural gas--\$ per million BTUs (U.S. 1988, Quebec 1988). Canadian prices are in Canadian dollars.

[C] Average commercial prices for fuels and electricity--\$ per million BTU (1988).

[D] Average industrial prices for fuels and electricity--\$ per million BTU (1988).

[E] Average industrial price deflator in Canadian dollars. A conversion factor of 38,596.65 BTUs per cubic meter (\$0.2314/cubic meter) was employed.

Basic data sources: Regional Financial Associates [A], and the 1992 Canada Year Book [A,B], American Gas Association, Energy Statistics Handbook (8/93) [B], and Energy Information Association [C,D].

Table 4: Human Resources Quality

State	Expenditures for elementary and secondary education [A] (\$ per pupil)	Education Quotient [B] (100=national average)	State and local appropriations for higher education [C] (%)	Percent of the Population with 4+ years of college [D] (%)	Value added per employee [E] (\$)
California	4,686 (35)	_	_		_
Connecticut	8,299 (4)	132.9 (1)	5.4 (45)	27.2 (1)	50,061 (26)
Florida	(+1) 650,5				_
Maine	5,969 (13)	99.5 (29)	_	18.8 (27)	_
Massachusetts	6.323 (9)		_		66,355 (31)
Minnesota	5,510 (16)		_	21.8 (15)	_
New Hampshire	5,500		-	24.4 (7)	_
North Carolina	4,857			17.4 (36)	_
New York	8,658			23.1 (10)	_
Oregon	5,972			20.6 (20)	_
South Carolina	4,537			16.6 (38)	_
Tennessee	3,736 (46)			16.0 (43)	_
Vermont	6.992 (5)			24.3 (8)	_
Washington (state)	3,320			22.9 (12)	_
Wisconsin	5,331	131.0 (2)		17.7 (34)	67,682 (30)
Quebec	5,354 ()	. A.	() 0.62	N.A.	N.A.

N.A. Denotes not available in a comparable form or for a comparable year.

Notes:

[A] State and local government expenditures for elementary and secondary education per pupil (1991-92). For Quebec, the per pupil data are in Canadian dollars for 1987-88.

Education Quotient for elementary and secondary schools (1992).

State and woutient for elementary and secondary schools (1992).

State and local government appropriations for public higher education as a percent of total appropriations for Quebec, the data are in Canadian dollars for 1987-88.

Percent of the population 25 years and older who have completed 4+ years of college (1990).

Value added per manufacturing employee (includes production and administrative employees) (1989).

Basic data sources: U.S. Department of Commerce [A,D,E,F], <u>1992 Canada Year Book</u> [A,C], <u>Expansion Management Magazine</u> [B], and Research Associates of Washington [C].

Table 5: Labor Cost Criteria

_		
Unionization rate for manufacturing workers <u>Durables [G] Non-durables [G]</u> (%)	16.19 (25) 13.04 (18) 7.93 (7) 21.29 (29) 30.70 (48) 16.07 (24) 24.55 (40) 12.91 (17) 5.63 (2) 24.16 (37) 22.50 (31) 5.80 (31) 6.70 (4) 6.70 (4) 23.47 (35) 23.96 (36)	
Unionization rate for manufacturing Wo <u>Durables [G] Non-dur</u> (%)	13.65 (19) 18.23 (25) 5.72 (5) 10.43 (12) 21.14 (28) 12.26 (15) 16.17 (23) 7.96 (8) 3.84 (2) 25.19 (34) 14.82 (2) 8.71 (10) 8.71 (10) 8.	
Workers' comp. burden per \$100 of payroll [F] (\$)	6.73 (35) 3.84 (15) 7.33 (38) 3.74 (12) 9.21 (42) 7.85 (40) 6.19 (33) 5.81 (30) 2.59 (3) 7.16 (37) 4.99 (21) 2.68 (4) 3.63 (11) 3.86 (16) N.A.	
Average weekly U.I. benefit [E] (% of Ave. Wage)	25.6 (1) 36.2 (20) 38.0 (28) 40.5 (37) 41.1 (40) 43.8 (45) 43.6 (44) 30.9 (8) 30.9 (8) 30.9 (8) 31.6 (9) 40.0 (35) 37.9 (25) 37.9 (25) 37.9 (25) 40.4 (36)	
Employer contribution for unemployment insurance [D] (% of Total Wages)	0.71 (17) 0.51 (9) 0.34 (4) 1.52 (46) 1.01 (31) 0.74 (19) 0.74 (19) 0.42 (5) 0.42 (5) 0.42 (5) 0.42 (5) 0.42 (4) 1.04 (4) 1.06 (49) 1.29 (41) 1.69 (48) 1.47 (45)	
Change in average annual pay [C] (%)	4.8 (37) 7.3 (50) 4.8 (38) 2.6 (10) 5.9 (44) 7.1 (49) 4.5 (32) 6.4 (46) 4.7 (36) 6.4 (46) 6.2 (41) 3.1 (12) 3.9 (27) N.A.	
Average hourly : earnings in manufacturing [8] (\$)	11.48 (38) 11.53 (40) 8.98 (6) 10.60 (20) 10.59 (19) 11.39 (36) 11.23 (34) 11.23 (34) 11.11 (31) 11.11 (31) 11.15 (33) 8.84 (5) 9.55 (12) 10.52 (18) 11.11 (31) 11.11 (31)	
Unemployment rate [A] (%)	9.1 (2) 7.5 (12) 8.2 (9) 6.5 (31) 7.1 (23) 8.5 (6) 7.5 (12) 7.5 (12) 7.5 (12) 7.5 (12) 6.6 (28) 7.5 (12) 6.6 (28) 7.5 (12) 7.5 (12) 7.5 (12) 7.5 (12) 7.5 (12) 7.5 (12) 7.5 (12) 7.5 (12) 7.5 (12) 7.5 (12) 7.5 (12)	
State	California Connecticut Florida Idaho Maine Massachusetts Minnesota New Hampshire North Carolina New York Oregon South Carolina Tennessee Vermont Washington Wisconsin	

Notes:

N.A. Denotes not available in a comparable form or for a comparable year.

[A] Data for the U.S. unemployment rate are for 1992. For Quebec, the unemployment data are for 1989.

[B] Average hourly earnings of manufacturing production workers (1990). The Quebec data is in Canadian dollars.

[C] Percent change in average annual pay (1985-88).

[D] Average employer contribution to unemployment insurance as a percent of total wage compensation (1989 or comparable year).

[E] Average weekly unemployment insurance benefit as a percent of average weekly wages (1989).

[F] Workers' compensation insurance burden per \$100 of payroll (1991).

[G] Percent of the manufacturing labor force that is unionized (1991).

Basic data sources: U.S. Department of Labor and 1992 Canada Year Book [A,B,C,F,G], Expansion Management Magazine [A], and Tax Foundation [D,E].

Table 6: Tax Burden/Cost Criteria

State and local gov't Workers per 10,000 of population [F] (#/10,000)	562 (6) 537 (4) 566 (9) 690 (40) 653 (32) 533 (3) 685 (39) 586 (13) 627 (26) 708 (41) 620 (34) 620 (34) 649 (30) 649 (30) 649 (30) 67 (36)	
Maximum state corporate income tax rate [E] (%)	9.3 (43) 11.5 (48) 5.5 (15) 8.0 (30) 8.9 (37) 9.8 (46) 8.0 (32) 7.8 (27) 9.0 (38) 6.6 (23) 6.0 (10) 6.0 (10) 7.9 (29) 8.3 (33) 8.3 (33)	
Maximum state personal income tax rate [D] (%)	11.0 (50) 4.5 (17) 6.0 (1) 8.3 (43) 6.0 (22) 8.5 (44) 7.9 (40) 7.9 (40) 7.9 (40) 7.0 (36) 7.0 (36) 7.0 (36) 7.0 (46) 7.0 (4	
Income taxes per \$1,000 of income [C] (\$)	37.56 (40) 16.14 (9) 3.13 (5) 34.23 (37) 32.14 (32) 44.09 (47) 43.70 (45) 7.49 (8) 40.08 (44) 5.665 (50) 43.98 (46) 31.98 (46) 5.99 (7) 29.95 (28) 0.00 (1) 38.24 (42)	
State and local "Own Source" revenues per \$1,000 of income [B] (\$)	158.53 (29) 131.83 (4) 149.30 (20) 152.96 (24) 158.95 (30) 145.15 (15) 183.25 (44) 123.13 (2) 140.82 (10) 193.08 (47) 169.76 (41) 159.59 (3) 169.79 (42) 169.79 (42) 169.79 (42) 169.79 (42)	
State and local gov't expenditures per \$1,000 of income [A] (\$)	199.13 (37) 166.90 (13) 183.71 (25) 166.79 (12) 195.74 (34) 197.79 (26) 213.90 (44) 139.65 (2) 181.20 (2) 181.20 (2) 187.58 (36) 247.50 (49) 194.90 (33) 194.90 (33) 190.84 (31)	
State	California Connecticut Florida Idaho Maine Massachusetts Minnesota New Hampshire North Carolina New York Oregon South Carolina Fermessee Vermont Washington Wisconsin	

N.A. Denotes not available in a comparable form or for a comparable year.

Notes:

[A] State and local direct government expenditures per \$1000 of personal income (1991).

[B] "Own source" state and local revenues per \$1000 of personal income (1991).

[C] Income (personal and corporate) taxes per \$1000 of personal income (1990).

[D] Maximum state personal income tax rate (as of January 1993 for joint returns)

[E] Maximum state corporate income tax rate (1992).

[F] State and local government employment per 10,000 population (1991). Includes both full- and part-time workers.

Basic data sources: U.S. Department of Commerce [A,B,C], Center for the Study of the States [D], Advisory Commission on Inter-Governmental Relations [E], and U.S. Bureau of the Census [F].

Table 7: Social Policy Indicators

State	Percent of the non-elderly population W/out health insurance [A]	State environmental expenditures per person [B]	"Top" state tourism official's salary as a percent of the Governor's [C]	Per person receipts from tourism [D]	"Top" state economic development official's salary as a % of the Governor's [E]	Number of new business incorporations per 100,000 of population [F]
	(%)	(\$)	(%)	(\$)	(%)	
California	20.5 (40)	52.49 (7)	59.4 (36)	1,226.8 (13)	83.2 (24)	
Connecticut	10.3 (8)			913.9 (29)	86.7 (19)	
Florida		37.75 (12)			62.9 (38)	
Idaho	17.4 (35)	61.26 (5)	58.6 (39)	1,023.5 (21)	57.2 (40)	11.2 (16)
Maine	11.3 (14)				108.4 (8)	
Massachusetts	2.6	40.40 (11)		1,117.0 (17)	94.2 (12)	2.8 (37)
Minnesota	10.4				42.0 (45)	4.6 (31)
New Hampshire					66.7 (36)	10.0 (18)
North Carolina	14.8				57.3 (39)	5.7 (25)
New York	12.5				67.2 (35)	7.0 (24)
Oregon	16.9 (34)				76.2 (31)	-22.7 (50)
South Carolina	15.3			1,182.0 (16)	99.1 (9)	9.4 (19)
Tennessee	•				(97) (79)	3.1 (35)
Vermont		36.31 (13)		2,723.7 (3)	65.3 (37)	
Washington	12.2 (18)	53.11 (6)	43.2 (48)		78.1 (30)	17.3 (8)
Wisconsin	9.7 (5)	34.56 (15)		874.1 (35)	42.3 (48)	
Quebec	N.R.	N.A.	N.A.	N. A.	N.A.	N.A.

N.A. Denotes not available in a comparable form or for a comparable year.

N.R. Denotes not relevant since Canada has a single-payer, nationalized health care system.

Notes:

[A] Percentage of the population without health insurance (1988).

[B] Spending on state environmental programs per person (1988).

[C] Salary of a state's top tourism official as percent of Governor's (1992).

[D] Receipts from tourism per person (1987).

[E] Salary of a state's top economic development official as percent of Governor's (1992).

[F] New business incorporations per 100,000 population (1990).

Basic data sources: Employee Benefit Research Institute [A], Council of State Governments [B,C,E], U.S. Travel Data Center [D], and Regional Financial Associates [F].

Table 8: Life Quality Criteria

	Green Index Composite "fun and quality of life" score [A]	Violent crime rate per 100,000 Population [B] (#)	Disposable personal income in 1992 [C] (\$)		~ ~ DI
	_		18,725 (10)	13.9 (33)	73 (5)
	_		_		_
	_		17,315 (19)		_
	_		14,932 (39)		_
		137 (5)		13.1 (26)	57 (33)
	_				_
	_				_
New Hampshire	_		20,311 (4)		54 (41)
	_				_
	_				58 (28)
	_			9.2 (7)	_
South Carolina	_			_	_
	_		16,002 (33)	16.9 (43)	_
	_		16,557 (25)	10.9 (16)	_
	_		18,553 (12)	8.9 (6)	(24) 94
	(46) (15)	223 (8)	289	9.3 (9)	_
	N.A.	792 ()	N.A.	м. А.	N.A.

N.A. Denotes not available in a comparable form or for a comparable year.

[A] Composite fun and life quality index (1991-92).
[B] For the U.S., the violent crime rate per 100,000 population is for 1989. For Quebec, the violent crime rate per 100,000 population is for 1991.
[C] Disposable personal income per person (1992).
[D] Percent of population living below the poverty level (1990).
[E] Number of days of sunshine as a percent of the year for the largest or sunniest major city in the state (1990).

Basic data sources: Green Index of Island Press, Inc. [A], Federal Bureau of Investigation, 1991 Canadian Crime Statistics [B], U.S. Commerce Department [C], American Medical Association [D], and U.S. National Oceanic and Atmospheric Association [E].

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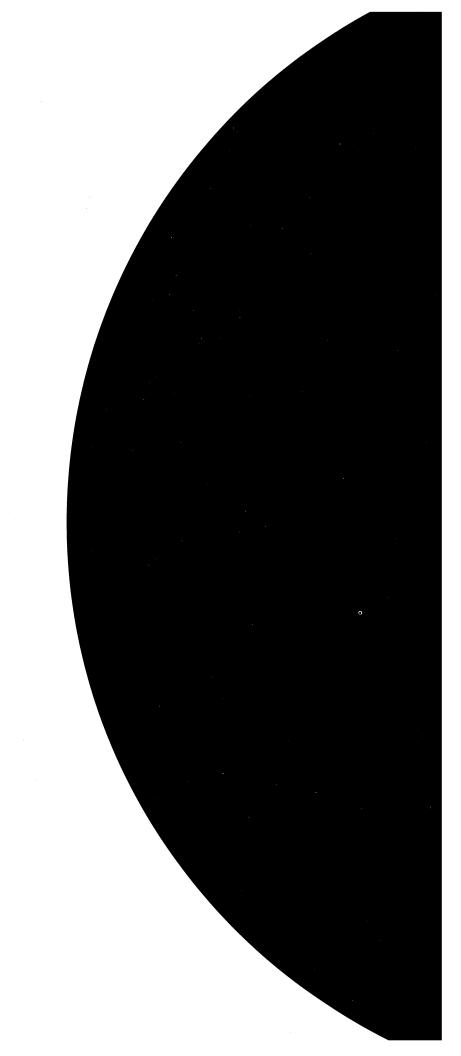
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Established in 1987, the Vermont Business Roundtable is a non-partisan organization dedicated to helping Vermont achieve long-term public policy objectives worthy of its citizens. Composed of the principal officers of 125 Vermont companies representing 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.



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