

ECONOMIC DEVELOPMENT

A. State of the Economy in the Region

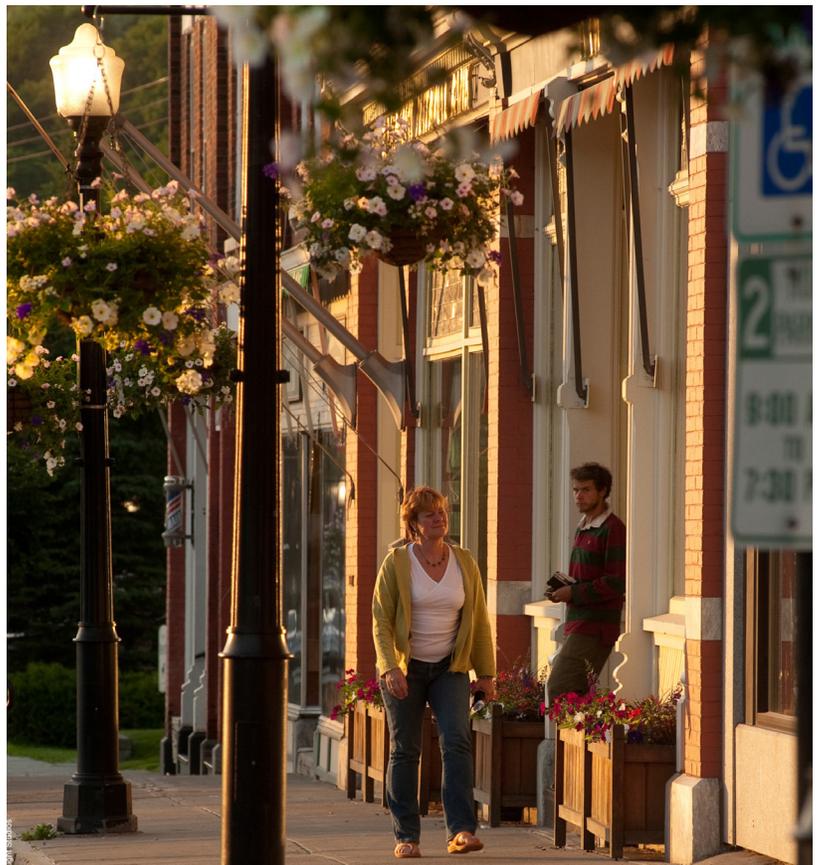
The TRO Region is largely rural and sparsely populated, as is typical of most of Vermont. Its landscape and scenery provide numerous recreational and professional opportunities, and the Region's economy is a reflection of historical patterns of development and recent economic trends, both local and statewide. Regional occupations are diversified, capturing the professional, technical, service, manufacturing, and agricultural sectors. As a consequence, the Region's economy is not dominated by a single business type. The Region's diverse business mix currently affords a reasonably good match between jobs and population.

Job growth in the Upper Valley Region has been modest, and unemployment in the Region has been relatively low. While low unemployment rates have their positive attributes, there are negative ones as well. Low unemployment can be regarded as a barrier for businesses looking to expand or locate to the Region because there may be concern that not enough skilled and available workers exist in the area.

Portions of the regional economy face favorable work conditions and offer attractive opportunities, while, in others, low wage rates and weak income growth exists. This appears to push people into lower-level employment or into the job market when they may not otherwise choose it. Wage rates have been growing, but still lag slightly behind the state as a whole. The economic challenge for the Region is to increase new and better

wage jobs. It is in the Region's long-term economic interest to foster a business climate that will encourage the growth of businesses that are appropriately scaled to communities and provide high-paying, high satisfaction jobs.

The Region's land reflects many changes. The number of farms has increased marginally; however, the amount of farmland and the number of people employed in agriculture, silviculture, and other natural resource-dependent occupations have declined in recent generations. Today's land uses show more of a trend toward subdivision of agricultural and forest land, resulting



Randolph | Source ©First Light Studios

in single or multiple home development geared toward middle and upper income buyers.

How Towns View Themselves Economically

The towns in the TRO Region have developed in different ways economically. Their town plans reflect towns' similarities, differences, and interdependence. Some towns regard themselves as economic centers, while others celebrate their remoteness.

The fact that several towns, such as Barnard, Bridgewater, Granville, and Tunbridge, are able to list and individually describe most sizable commercial enterprises within their borders in two or three sentences illustrates a low level of larger commercial development. There are many more small commercial operations in these towns in the form of home-based businesses that are generally recognized in municipal plans. These towns' municipal plans state that they would like to see increased commercial activity so long as it does not adversely affect their rural character, natural resources, or local services. But, for the most part, they do not propose specific policies that would help guide growth or protect special attributes. Corinth regards their very act of adopting a town plan as "a step toward protecting the town against adverse development and use." Chelsea's Plan is an exception, as it suggests actions that could be taken to focus traffic-generating industrial activity in specific locations.

Some towns have remained rural because they are remote. These are the towns which

are most distant from existing centers of development. While it's possible that outward growth pressures from economic centers could reach the farthest corners of the Region in the distant future, it is unlikely to be substantial in any way without increased access to technology. In the meantime, home-based and small scale businesses that process local products in towns that have access to transportation and/or high-speed internet will be most likely to succeed in smaller towns. Clearly, the economic future of these towns depends largely on forces outside of their direct control.

On the "developed" end of the spectrum, several towns define themselves as economic hubs, and are seeking suitable locations for growth by encouraging diversification (Woodstock and Bradford). Others, such as Randolph and Hartford, want to accommodate growth and increase their roles as regional employment, shopping, and service centers through improving infrastructure and services.

A number of towns are "bedroom communities" that provide housing opportunities for regional growth centers' workforces, such as the greater Hartford area and the Lebanon/Hanover area in New Hampshire. A listing of such "bedroom communities" within the Region would include towns like Sharon, Royalton, Pomfret, Strafford, and Bethel. The general proximity to major highways, such as I-89 and I-91, make them prime locations for workforce housing for employees of businesses in areas that have higher concentrations of available jobs.

A review of local plans has revealed several common themes or values related to economic growth. These are:

- A desirability for home and small-scale businesses;
- The relative importance of promoting agriculture and forestry to maintain rural character;
- The fact that property tax revenues and burden are key economic development factors; and
- The need to consider “quality of life” as having intrinsic economic value.

Existing Economic Conditions

The 2011 Comprehensive Economic Development Strategy and East Central Vermont Economic Development District Designation

Our Comprehensive Economic Development Strategy (CEDS) is an economic roadmap designed to diversify and strengthen regional economies by helping to guide growth throughout the forty town East Central Vermont Economic Development District that covers towns in both the TRO and Southern Windsor County Regional Planning Commission Regions. A CEDS is required by the U.S. Department of Commerce Economic Development Administration (EDA) for districts to be eligible for planning and construction funds. The dynamic process of developing a CEDS is heavily dependent on the coordinated efforts of regional planning and economic development organizations, town governments, interest groups, and private industries that are concerned about the economic development of a Region.

The 2011 CEDS process used an analysis of economic conditions completed for the area by economists Kavet, Rockler and Associates, which substantially informed the writing of the 2012 TRORC Regional Plan with respect to both data and policy formulation. The 2011 CEDS illustrated how the ECV Region was in economic distress, owing to a host of factors, including:

- Contracting population numbers in over half of the ECV towns.
- A real unemployment rate of 14.4% (as of 2011). This rate is reported by the Bureau of Labor Statistics every month, and includes all individuals who want full-time job, including those who are underemployed or discouraged individual that have given up the search for a full-time position.
- Lowered real wage rates, per worker, and lower employee wage income rates compared to the state as a whole.
- Overall negative net business creation.
- A pronounced disparity between income and housing costs and needs.
- Areas underserved by high-speed internet and cellular telecommunications.
- A lack of skilled labor opportunities to utilize conferred higher education degrees may account for a decrease in younger workers.

In 2009, the ECV CEDS Region applied to the EDA for a designation as an Economic Development District (EDD), which was officially granted in December, 2013. TRORC, in conjunction with EDD efforts throughout the Region, completed a rewrite of the 2011 CEDS in 2015.

B. Regional Challenges and Opportunity Areas for Economic Development

Telecommunications - The Region requires access to fast and efficient internet, data, and cellular technologies to promote business growth and attract prospective employees.

Housing - Providing ample workforce housing, both in the rental and home buyer markets, is key to meeting the needs of the Region's workers.

Sewer and water supply - While some areas in the Region have ample infrastructural capacity to handle any anticipated growth, only nine of the Region's 30 towns currently have both municipal water and sewer services for residents. Expansion and updates to existing services and the creation of such systems in other village and town centers will aid in economic growth and in attracting new businesses.

Retention and expansion of existing businesses - Numerous employers have closed their businesses in the Region, particularly in the wake of the Recession and Tropical Storm Irene. Improving efficiency, knowledge about the market, financing opportunities, and better business and entrepreneurial practices will improve business vitality.

Workforce development - Local businesses often report that they struggle to find applicants for their jobs, which may be due to lack of nearby housing opportunities and services as much as it is owing to a lack of qualified workers.

Identification of needed businesses

- It is unclear, in many instances, what market gaps there are for new businesses, which need to be identified to boost local economies.

Existing buildings, Brownfields - A better understanding of sites that may be ripe for reuse or redevelopment as new business headquarters or for the expansion of existing businesses is needed in core town and village locations. Producing a thorough inventory of vacant lots and under-utilized parcels while also working toward reclamation of old properties, where possible, is needed to promote infill development in downtowns.

Plans and permitting - Lack of clarity or ambiguity in municipal plans makes it difficult for town officials, residents, and developers alike to properly discern which locations are most desirable for new business growth as well as what type of growth is preferred. Further, inconsistencies between some municipal plans and their corresponding implementing bylaws also confuse those making investment decisions.

Transit and transportation - There is a distinct lack of public transit between many of the Region's towns and the regional growth centers, which makes commuting difficult. High transportation costs (i.e., owning and maintaining a vehicle and paying for gasoline) are cost-prohibitive for many and may compound poverty.

Tourism - The tourism industry needs to continue efforts that promote attraction diversification, showcasing the myriad

spring and summer recreational, scenic, and artistic tourist opportunities that our Region has to offer in addition to the more ubiquitous autumn “leaf peeping” and winter sport seasons that many tourists commonly associate with Vermont.

Value-added agriculture and forest products - While opportunities exist in the Region for food production, raw wood products, lumber, and craft furniture production, these businesses could experience a renaissance, particularly with the aid of enhanced coordination amongst business owners. Gaps in the market should be targeted more effectively to drive growth in areas that are underserved.

C. Workforce Composition

A workforce is defined as all adults aged sixteen years and over who are either currently employed, are actively pursuing employment, are not held in an institution (for incarceration, mental health, or other health-related reasons), or are not enlisted in military service. The workforce does not typically include those who are full-time students unless they happen to work while in school. It also does not necessarily take into account those who may consider themselves outside of the labor force after losing a job or being unemployed for a prolonged period. Additionally, people who do work on a cash-in-hand basis, such as many child care workers, are not included.

Size of the Workforce

According to the Vermont Department of Labor, the Region’s workforce increased at an approximate rate of 0.9% between 1990 and 2000. This growth rate is close to that

seen at the state level over the same period (0.8%). Unlike the state, however, the Two Rivers Region averaged 1.0% growth in workforce numbers between 2000 and 2010, even with the impacts of a severe economic downturn, while the entire state of Vermont only managed 0.7% growth over the same period. In real terms, this amounts to 2,520 workers added to the state workforce per year during the 2000s. Three hundred-eighty workers entered the Two Rivers Region during that time, which constitutes 15% of all added workers in Vermont.

Viewing data for the two decades from 1990 to 2010 with respect to individual towns, over half of the towns in the Region have experienced a less pronounced workforce growth than the Region as a whole. The spread of towns impacted by these lower growth numbers runs the gamut of towns with access to major highways (such as I-89 and I-91), towns that are not in close proximity to such roadways, and towns that have municipal infrastructure or access to broadband internet. The towns with the lowest workforce participant growth rates are: Rochester (-0.1%), Bethel (0.1%), Bradford (0.1%), Braintree (0.2%), Royalton (0.2%), and Hancock (0.3%). The towns that have seen the highest growth in workforce numbers are: Strafford (1.8%), Fairlee (1.7%), Pittsfield (1.5%), Thetford (1.4%), Topsham (1.4%), Vershire (1.4%), and West Fairlee (1.4%).

Age of the Workforce

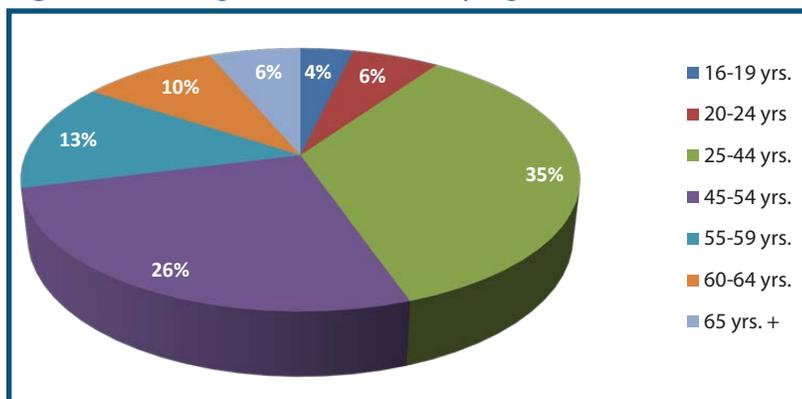
The TRO Region saw significant shifts in certain workforce age groups between

2000 and 2012, according to Census and American Community Survey (ACS) figures. The most dramatic declines were with workers under the age of 44. All told, there was a decrease of 4,086 workers, a 24% overall drop (see Figure 13-2). This follows state trends over the same time frame, albeit at a slightly higher rate (Vermont saw a 20.5% decline for the same age range). A steadily aging workforce is already upon the state, as the Baby Boomer

generation enters retirement. Having a young workforce capable of replacing the established workforce will ensure economic vitality for the Region in the long term.

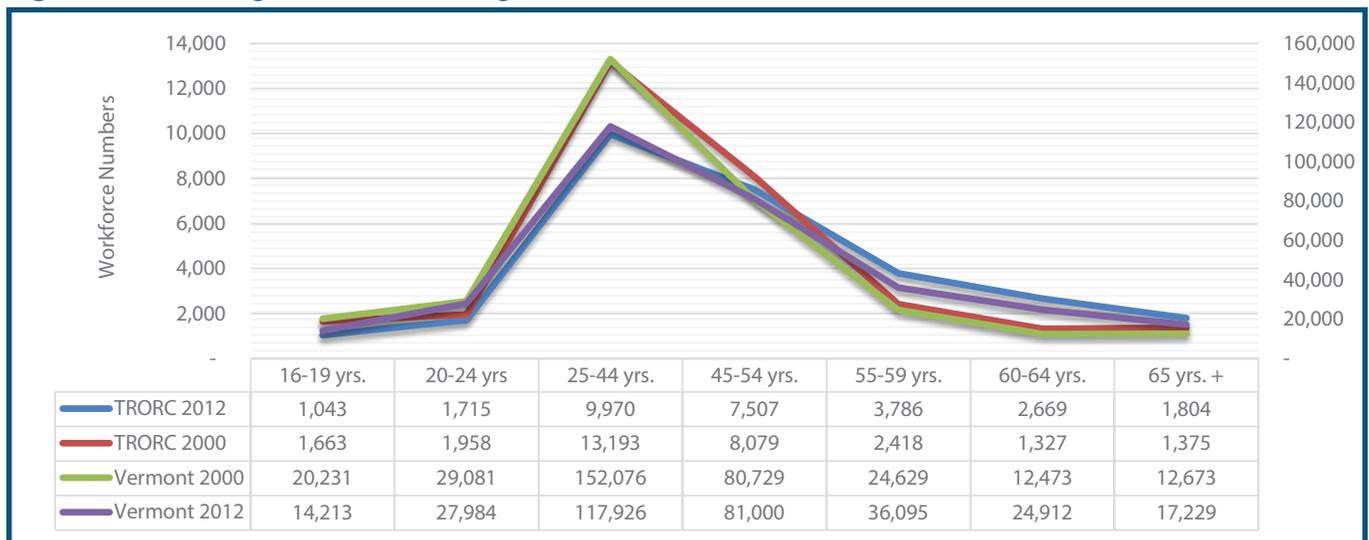
At present, the majority of workers in the Region are in the 25 to 44 year age bracket. However, this majority is slim, as approximately half (49%) of the current workforce is aged 45 or older (see Figure 13-1). In 2000, the same 45 and over age brackets only accounted for 39% of the workforce. While we lack the data to know how many respondents from the 45 to 54 year old age bracket in the 2012 ACS will reach retirement age within the next decade, trends suggest that a substantial share will no longer be in the workforce in the 2020s. How the Region will fill vacant positions while simultaneously driving additional job growth is a concern since the Region currently lacks thousands of younger replacement workers.

Figure 13-1: Regional Workforce by Age



Source: U.S. Census, 2008-2012 American Community Survey 5-Year Estimates

Figure 13-2: Changes in Workforce Ages, 2000 & 2012



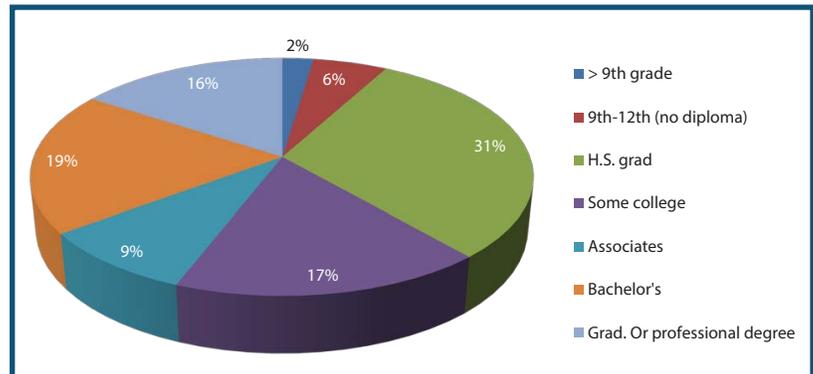
Sources: Population Group—Total, Census 2000; U.S. Census, 2008-2012 American Community Survey 5-Year Estimates

Educational Attainment and Workforce Training

A well-educated workforce bodes well for having a skilled workforce capable of attracting higher-paying, specialized jobs to our thirty towns. As of 2013, the majority of residents over the age of 18 had completed, was pursuing, or had pursued higher education qualifications beyond a high school diploma (nearly 61%). Of those 25 and over, 44.5% have completed an Associates, Bachelor's, graduate, or other professional degree. This is an increase of 7% in the twelve years between 2000 and 2013 alone. The state, in contrast, has a slightly higher percentage of individuals who have earned these qualifications, but has witnessed a decline in higher education attainment in recent years. Compared with the rest of the country, the Region's level of educational attainment with respect to Associates, Bachelor's, graduate, and professional degrees is much higher. Only 33.6% of the nation's populace has attained these qualification levels.

As previously mentioned, many industries, most notably the manufacturing sector, routinely struggle to find qualified workers. This problem is multifaceted in that it reflects a small qualified workforce, an inability to retain and train from within local communities to fill positions, and a struggle employers face to recruit from outside the Region. According to findings presented in the 2014 Upper Valley Workforce Needs Assessment, developed by the Green Mountain Economic Development Corporation (GMEDC), three key industry areas that require skilled workers are the health care and

Figure 13-3: Educational Attainment Levels for Adults 25 Years and Older, 2013



Source: U.S. Census, 2009-2013 American Community Survey 5-Year Estimates

social assistance sector, manufacturing, and professional, scientific, and technical services industries. An assessment of these three sectors revealed a need for employees in the following fields: computer systems analysts, health educators, licensed vocational and practical nurses, pharmacists, physicians, industrial production managers, mechanical engineers, and, more generally, individuals with a background in science, technology, engineering and mathematics (STEM subjects).¹

Knowing that there is a pronounced need for employees in particular industry sectors satisfies only one piece of the employment puzzle. While the needs have been identified, there still remains an issue of filling vacancies with qualified individuals, both from within and out with the existing workforce pool. Finding employees from within the Region may prove difficult if recruits lack the professional experience of education necessary to fulfill job duties. Resources, such as the Pathways to Promising Careers, help individuals

A Snapshot of Workforce Development Opportunities in the TRO Region

- GW Plastics launched its School of Tech in January, 2015 in conjunction with the Randolph Union High School. It will provide high school students with a comprehensive, hands-on course to help equip the next generation of workers with the skills needed to pursue a career in manufacturing.
- Vermont Technical College, in collaboration with GMEDC, offers a four-year Advance Machinists Apprenticeship program. This program helps local manufacturers meet growing workforce needs.
- The Vermont Academy of Science and Technology (VAST), taught at VTC, provides local high school students with a chance to partake in an alternative senior year, where students can complete their senior year of high school while earning credits toward their first year of college.
- The Vermont Strong School program, created by the state legislature in 2014, will allow students in qualifying engineering and IT degree programs to receive loan forgiveness for their final year of degree studies.

Source: Green Mountain Economic Development Corporation, 2015

identify high-paying, high-growth jobs throughout the state that match to academic experience.² With respect to recruitment from outside the Region, though, there are a number of factors contributing to difficulties in finding non-local recruits for work, including: the cold climate; lack of metropolitan opportunities; difficulty in finding spousal employment; lower pay and higher housing costs (relative to more urban areas); and overall lack of ethnic diversity.³

Retaining the Region's existing workforce pool is of the utmost importance, particularly for our younger residents fresh out of high school or recent college graduates. Further findings from the *Upper Valley Workforce Needs Assessment* point to the desire to strike out on one's own and explore as being inducement enough to experience life outside of Vermont, even if only temporarily. However, one of the primary reasons for leaving the TRO Region is the allure of better job prospects, often near more metropolitan areas. Many may also feel they generally lack the requisite skills for the work that is believed to exist within the Region. To counter that pull, many businesses have begun to invest more time in training on-the-job to equip less-qualified, but local, recruits with the hands-on and management skills that are needed within their companies. For most employers, any hire is a risk until new employees have been vetted for an initial period to test professional strengths and weaknesses. "Growing" a seasoned workforce through on-the-job training aids this process, and some employers have created apprenticeship opportunities as a means of filling regional workforce gaps.

Another way to bolster educational opportunities for the Region’s burgeoning and existing workforces is to promote the creation of continuing adult education opportunities throughout the Region. The workforce needs experience with learning day-to-day job skills, but also with more general business and personnel management. Training in these areas can be in the form of on-site, practical job training opportunities or course and accreditation programs outside of the workplace that supplement existing job skills.

In 2013, the State of Vermont passed Act 77, also known as the Flexible Pathways Initiative, which is a sweeping education reform measure that expands the array of learning opportunities to students. It puts an emphasis on there not being a “one size fits all” method to educating children, given the wide range of personalities, aptitudes, and knowledge possessed by youth. This initiative allows schools to provide the following educational enhancements and curriculum personalization for students:

- Expansion of the existing Statewide Dual Enrollment Program
- Expansion of the Early College Programs
- Increased access to work-based learning
- Increased virtual/blended learning opportunities
- Increased access to Career and Technical Education (CTE)
- Implementation of Personalized Learning Plans (PLPs)⁴

In essence, this Act, while not a mandate, grants schools greater latitude in personalizing students’ academic plans that cater to their learning strengths and abilities, provides exposure to the professional realm (and, specifically, local employment opportunities), and helps focus students on life in higher education beyond high school. These programs, among other things, will allow students to gain greater insight into some of the Region’s industries and employers in the hope that it will furnish students with some perspective on concrete job opportunities that they can pursue as graduates while still remaining a part of their community.

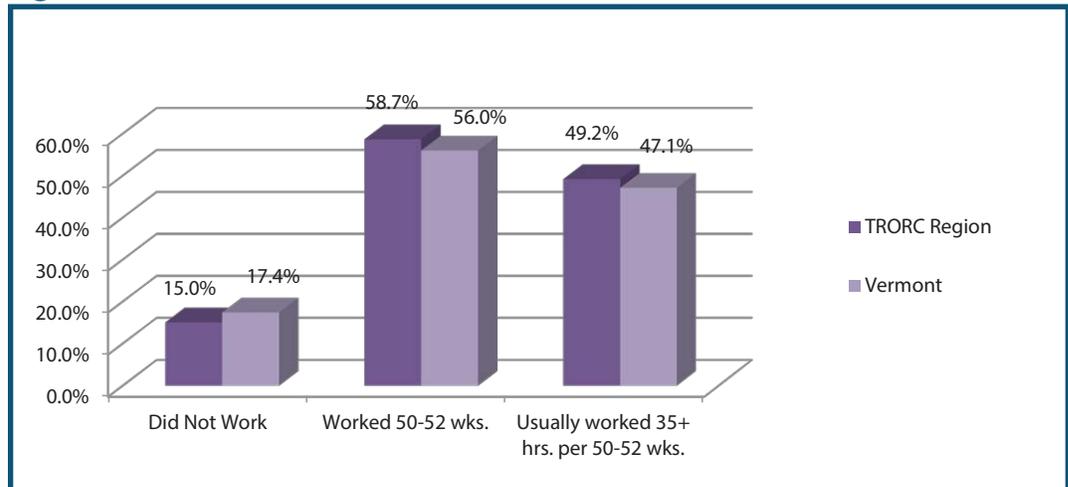
D. Employment Sector Characteristics

Employment Rates

According to U.S. Census Bureau data from 2010, of the population aged 16 to 64, 58.7% of the population worked a total of 50 to 52 weeks out of the year, while 15% were not participants in the workforce. Of those who were in this workforce age demographic, 49.2% work an amount equal to or in excess of 35 hours per week. Compared with state figures, towns in our Region cumulatively have more workers that are regularly working full-time than Vermont does as a whole. Additionally, TRORC towns have a lower percentage of individuals aged 16 to 64 who are inactive in the workforce.

Unemployment is defined to include individuals 16 years or older who are available and eligible to work, and have been job seeking in the four weeks

Figure 13-4: Work Status in the Past 12 Months, 2010



Source: U.S. Census Bureau, 2010 American Community Survey

preceding a survey by the Department of Labor. While a number of towns in the Region have seen increased levels of unemployment, most towns saw positive growth in workforce numbers over the past two decades, with Rochester being an exception (partly attributable to population declines and employment losses).

According to the Vermont Department of Labor, the three towns with the highest rates of unemployment in the Region as of 2014 are Pittsfield (8.3%) Granville (6.3%), and Hancock (6.3%). These towns are, coincidentally, the smallest towns in the Region, and are comparatively remote in that they are not immediately accessed by major interstates or rail links. None of these towns have public schools due to declining numbers of school aged children. All three towns have seen the loss of a major employer since 2000. Conversely, the towns with the lowest unemployment figures are Barnard, Pomfret, Thetford, and West Fairlee, all of which have a 2.5% unemployment rate. While these

four towns saw overall population declines between 2000 and 2010, two of the towns (Barnard and Thetford) have seen increases in their 16 to 64 year old population. Most of these towns are bedroom communities where people commute to nearby employment centers.

Income Levels

Income distribution levels in TRORC's member towns vary widely. Figure 13-5 illustrates the distribution of wealth within the population of each town for residents that filed nonexempt income tax returns, in descending order from the highest populated town to the least. The tax returns filed within each town are grouped into eight tax brackets, and the percentage of the returns which fall into each of the tax brackets is displayed. The chart shows a fairly equal distribution amongst the tax brackets, barring a tendency for a larger proportion of the population to fall into either the lowest two brackets or the highest bracket. The proportional

and growth centers. Three of the towns with the highest median AGIs, on the other hand, are immediately adjacent to each other, in fairly close proximity to highways, and are close to one of the Region’s main growth centers: the greater Hartford/Hanover/Lebanon area straddling the Connecticut River. These three towns are Norwich, Strafford, and Thetford, and are often sought after as bedroom communities for the retail, medical, and academic industries that dominate the business sector in nearby communities.

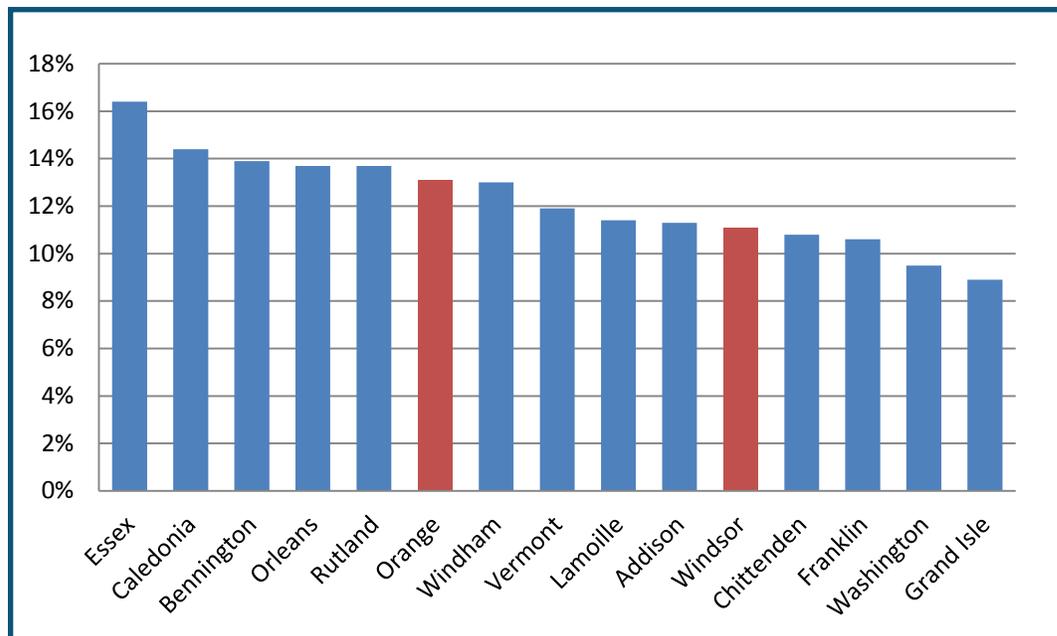
Poverty

According to 2012 ACS data, Vermont has a poverty rate that stands at 11.8%, ranking it 40th in the nation for lowest overall poverty rate. This was an increase of 0.3% from the previous year. At a local or regional level, it is very difficult to

meaningfully determine poverty levels. That said, basing poverty on federal data does not always accurately represent the entire picture of poverty in the Region. The federal poverty line is calculated off of the price of food and does not take into account the proportion of family income spent on housing and transportation, which is particularly high in this Region. Further, it fails to consider certain forms of income, such as capital gains or income earned outside of the standard employment sector (i.e., earnings made “under the table”).

A more regionally specific measure of the public welfare is the Vermont Livable Wage, which is based on a more comprehensive list of basic needs, and is calculated by the Vermont Legislative Joint Fiscal Office. Vermont’s Livable Wage for 2012 set a single person’s threshold

Figure 13-6: Poverty Rates by County, 2012



Source: American Community Survey, 2012

income at \$25,964 (at a rate of \$12.48 per hour), below which a person would have to diminish spending on basic needs.⁵ This figure reflects full-time employment (with health insurance benefits) and contribution to one-half of a two-person household's expenditures, without the need to support children. This is far higher than the federal poverty line, set in 2012 at \$11,172.⁶ The implication here is that the percentage of the Region's population struggling to meet basic needs encompasses a much larger percentage than just those who fall beneath the federal poverty line. In analyzing factors beyond income level, the Rockefeller Center at Dartmouth College found that poverty across the state is largely white, rural, and prevalent amongst people who hail from well-educated households (individuals raised by parents with college degrees and higher).⁷

Compared with other counties in the state, the Two Rivers Region is not beset by the highest rates of poverty in the state with respect to persons of all ages (see Figure 13-6). However, that statement is not meant to minimize the level of poverty in our Region, particularly in Orange County where poverty rates in 2012 stood at 13.1%. Additional anecdotal evidence from the Upper Valley Haven, the Region's only homeless shelter, speaks to an increase in the depth of poverty in the Region. The homeless shelter's services have come under increasing demand in recent years, especially from families. This is directly related to the interaction between the Region's increasing housing costs and its stagnant wages, as described by the Vermont Housing Finance Agency in their

Housing and Wages Report.⁸ Without reversing these trends, the Region will continue to see rising numbers of both individuals and families slipping into poverty or increased numbers of residents emigrating to more affordable areas.

With respect to the Region's working poor, 0.7% of men and 2.2% of women in the 2012 workforce were employed in the preceding 12 months but earned an income below the federal poverty level (when viewed as a percentage of all working individuals in the workforce). These numbers are slightly less stark than those for the state, for which 0.8% of its workforce consisted of men earning below the federal poverty level and 3% of women earning below the same threshold. The towns with the highest percentages of working poor in 2012 were: Topsham (10%), West Fairlee (10%), Bradford (9%), and Corinth (9%). The towns with the lowest levels of working poor were Bethel, Fairlee, Pittsfield, Sharon, and Woodstock, each with only 1% of their active workforce being classified as impoverished in 2012.

Employment by Occupation and Industrial Sector

Occupational opportunities have changed significantly in recent decades, and common occupations now include a range of office administrative, management, and sales opportunities. The 1980s were a period of decline for manufacturing jobs throughout the Region, and were simultaneously a time of growth in the areas of construction, financial services, real estate brokerage, and retail trade.

While the Region has historically been known to host largely agrarian jobs or timber and resource extraction work, that trend shifted dramatically over the past century. As can be seen in Figure 13-7, nearly 45% of the Region’s jobs fall within the managerial, business, science, or art occupation sector, whereas jobs in the natural resources, construction, and maintenance occupation sector now only account for a little over 12% of all jobs in the Region. The managerial, business, science, or art occupation sector grew by 20.9% between 2000 and 2012, while all other sectors have witnessed significantly lower growth or outright declines. Indeed, production, transportation, and materials moving occupational sector jobs declined by 24.5% between 2000 and 2012.

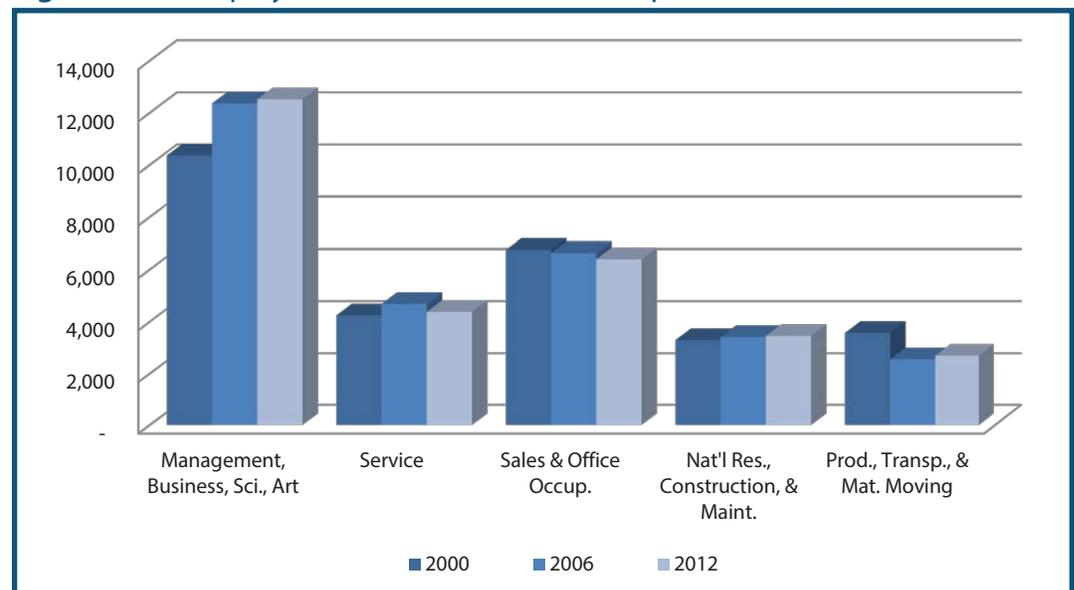
Breaking out the occupation sector further by industry sector, we see that the industry

with the highest percentage of jobs in the Region in 2012 was the educational and health services industry sector, which constituted over a quarter (28%) of all of the Region’s jobs. This statistic is largely attributable to the fact that there are numerous jobs opportunities in both of those areas, owing to the existence of major regional medical service centers (notably Dartmouth Hitchcock and Gifford Medical Center) and academic institutions (all of the municipal and private schools as well as higher education institutions like Dartmouth College, Vermont Law School, and Vermont Technical College).

Agriculture and Silviculture

Only 3.5% of all of the Region’s 29,394 jobs in 2012 were in the agricultural, forestry, fishing, or hunting industries. The state, in contrast, has only 2.7% of jobs in those

Figure 13-7: Employment Numbers across Occupation Sectors, 2000-2012



Sources: Selected Econ. Char., 2000 Census; Selected Econ. Data, 2006-2010 & 2008-2012 American Community Survey

industries. From 2000 to 2012, though, there was a 1.7% increase in agricultural, forestry, fishing, and hunting jobs within the Region. There are a range of farms in the TRO Region, some strictly agricultural, some raising livestock, and others that are dairy farms, all of which dot the primarily rural landscape of our thirty towns.

The 2012 Census of Agriculture produced by the USDA reported that Orange and Windsor Counties have seen an increase in the number of farms since 2007. Orange County has seen a robust increase of 9.5% in the number of farms since 2007, whereas Windsor County has seen much more modest growth at a rate of 0.13%. There is a greater disparity in the revenue seen in either county, as can be seen in Table 13-1, with Orange County farms earning over double the average earnings of farms in Windsor County.

Dairy remains a multi-million dollar industry in both Orange and Windsor Counties, accounting for 62.8% of farm revenue for Orange County and 40.6% for Windsor County. Additionally, the USDA captured how much revenue is derived from organic commodities for 2012, with 13.6% of Orange County's revenue and 6.5% of Windsor's. The majority of farms in both counties earned an amount in excess of \$50,000 in 2012 (90.7% in Orange County and 79.8% in Windsor County).

There were 1,589 documented farm workers in 2012, with 791 in Orange County and a further 798 in Windsor County. The majority of farms operated with only one or two workers in each

county (62.0% in Orange County and 49.1% in Windsor County). While the median farm size for both counties combined is 75 acres, only 27.5% of the farmland in both counties was used for crop growing. A further 20.3% of farmland in both counties is used for growing forage crops for livestock.

With respect to the silviculture industry and value-added wood products, there are many major regional employers that rely on forestland products, such as Copeland Furniture in Bradford and the Pompanoosuc Mills Corporation in Thetford, each with a workforce varying between 100 and 249 people. Numerous smaller operations exist, too, such as local sawmills and lumberyards, maple sugaring businesses, Christmas tree farms, and furniture producers. As noted in the TRORC Regional Forest Stewardship Report from 2012 (see Appendix H), there are a number of other smaller forest-related businesses in our Region:

- Britton Lumber (Fairlee – currently closed due to a fire in March, 2015);
- Shackleton Thomas (Bridgewater);
- Lumberjack Lumber (White River Junction);
- Redstart Forestry (Corinth);
- Baker Lumber Co. (White River Junction);
- David Hurwitz Originals (Randolph); and
- GMC Hardwoods, Inc. (Norwich).

Tourism

No exact numbers exist to show how many people in the Region work specifically in jobs catering to tourist needs; however,

Table 13-1: 2012 Agriculture Data

Market Value of Agricultural Products Sold (Incl. Direct Sales)		
	Orange Co.	Windsor Co.
Farms, 2012	748	768
Farms, 2007	683	767
Total sales (\$1k), 2012	\$ 53,540	\$ 22,416
Total sales (\$1k), 2007	\$ 43,292	\$ 24,978
Average per farm, dollars, 2012	\$ 71,578	\$ 29,187
Average per farm, dollars, 2007	\$ 63,385	\$ 32,566
Percent farms with sales over \$50k, 2012	90.7%	79.8%
Farms growing crops (incl. nursery and greenhouse crops), 2012	476	472
Farms growing crops (incl. nursery and greenhouse crops), 2007	394	435
Livestock, poultry, and their products	422	379
** Milk from cows, farms, 2012	101	43
** Revenue from dairy farms, 2012 (\$1k)	\$ 33,647	\$ 9,095
Value of products sold directly to individuals for human consumption, 2012 (\$1k)	\$ 2,109	\$ 2,556
Value of products sold directly to individuals for human consumption, 2007 (\$1k)	\$ 1,580	\$ 1,948
County Summary Highlights		
Land in farms, acres	105,234	101,362
Average size of farm, acres	141	132
Median size of farm, acres	76	74
Total crop land, farms	511	465
Total crop land, acres	33,207	23,585
Percentage of farm acres for crop land	31.6%	23.3%
Forage – land used for all hay and all haylage, grass silage, and greenchop, farms	345	325
Forage – land used for all hay and all haylage, grass silage, and greenchop, acres	24,157	17,797
Percentage of farm acres for forage	23.0%	17.6%
Hired Farm Labor – Workers and Payroll		
Number of hired farm workers	791	798
Total payroll (\$1k)	\$ 6,785	\$ 6,683
Farms with 1 worker	65	62
Farms with 2 workers	72	52
Percentage of farms with only 1 or 2 workers	62.0%	49.1%
Organic Agriculture		
USDA National Organic Program certified organic production, farms	52	20
USDA National Organic Program organic production exempt from certification, farms	7	13
Value of sales of certified or exempt organically grown commodities (\$1k)	\$ 7,255	\$ 1,458

Source: USDA Census of Agriculture, 2012

if we combine the number of individuals working in entertainment, the arts, recreation, and food services with those working in the retail trade, roughly 21% of the Region's workforce may directly (or tangentially) have a part in the Region's tourism industry. As such, the tourism industry still remains a key component to the Region's financial success. There is not simply one tourist attraction that is the anchor for the entire Region; rather, there are a multitude of year-round opportunities that visitors flock to the Region to explore and partake in.

Whether it is a cavalcade of leaf peepers descending upon our Region in autumn; skiers, snowboarders, and snowshoers traversing the landscape in the winter; or fishermen, hikers, and cyclists in the spring and summer months, the TRO Region has a wide range of recreational opportunities for tourists of all stripes throughout the year. Additionally, the cultural and artistic heritage of the Region cannot be overlooked. The breadth and depth of the history in the Region and the skilled craftsmanship displayed by so many makes the Region a draw for tourists seeking quality fine art, sculpture, pottery, and countless forms of value-added products. The extensive opportunities to sample locally produced food stuffs, including a wide range of artisanal cheeses and beer, is part of a larger niche market that draws on the local, craft food and drink movement that has become a cornerstone of the Vermont brand.

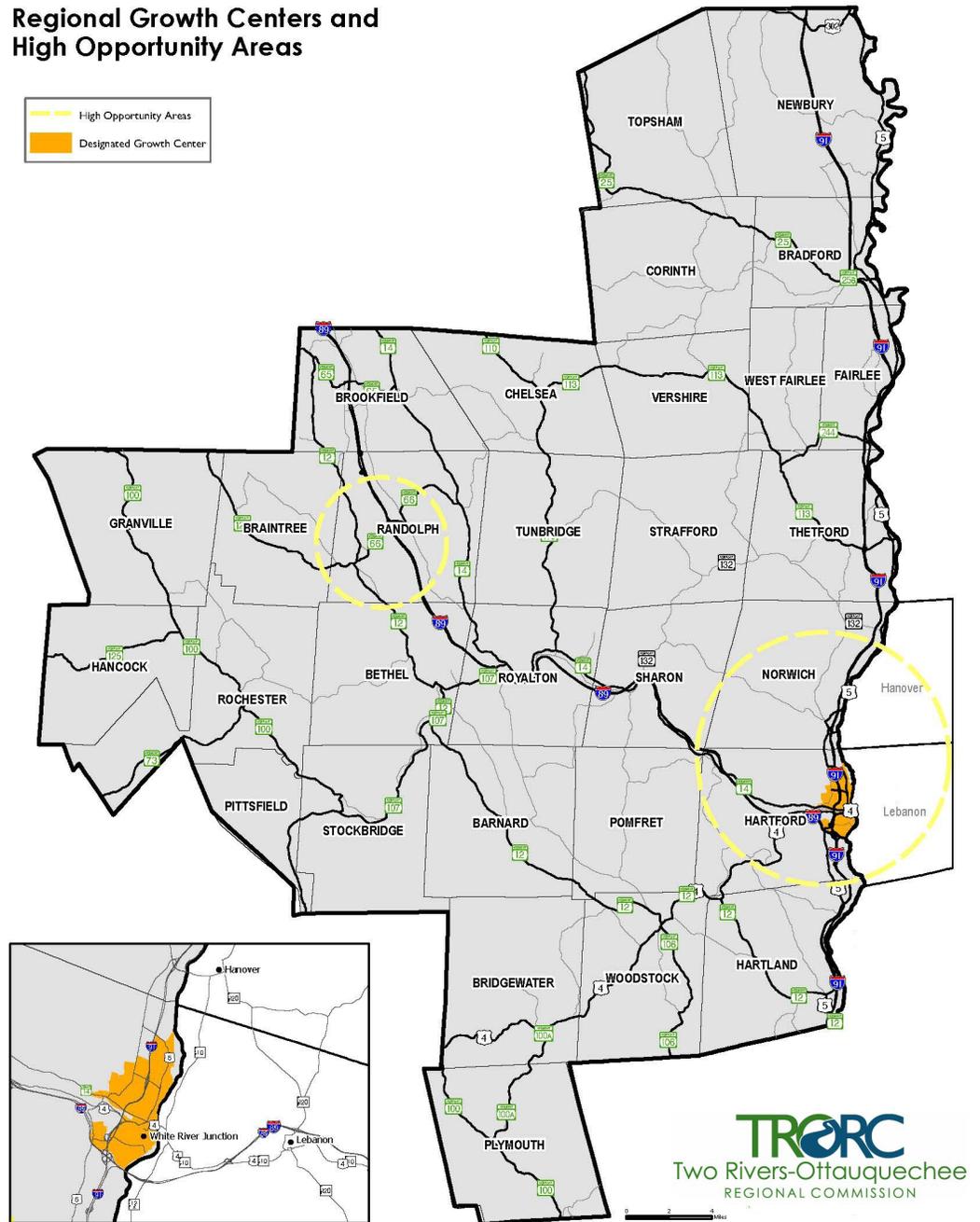
A key area of concern with the tourism sector is the need to ensure that all areas within the Region are capable of

diversifying their economies to attract visitors on a season-to-season basis instead of attracting a niche tourist base at only certain times of the year. Further, ensuring that the tourism industry is equipped to face future impacts from climate change head-on is critical to ensuring business continuity and financial and economic resiliency. This is of particular importance with respect to the winter sport industry, as it is most vulnerable to increasing temperatures and reduced snowpack levels.

Employment Centers and Commuting

The TRO Region has two major high-opportunity areas that are designated as having the strongest job markets, infrastructure, services, and educational institutions. These areas cross state lines and are key drivers for economic development and growth for the overall Region. The two major areas within and around our Region are Randolph and the area encompassing the following four towns: the towns of Hartford and Norwich within the Two Rivers Region and the towns of Lebanon and Hanover across the Connecticut River in New Hampshire (see Figure 13-8). As a consequence of the latter grouping of towns in particular, our regional economy is intricately interwoven in the fabric of the greater Upper Valley Region. Indeed, the Region is part of the Lebanon-Claremont (NH) Micropolitan Statistical Area, per the U.S. Census, denoting the cross-border relationship between TRORC's thirty towns and those in the adjacent towns of neighboring New Hampshire.

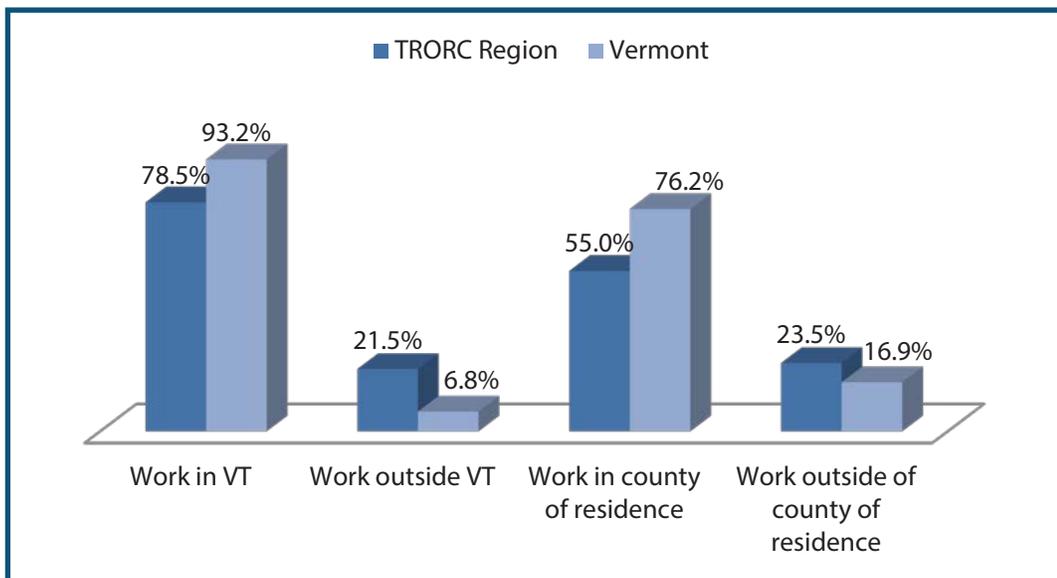
Figure 13-8: State Designated Growth Centers and High Opportunity Areas



Many residents in the Region routinely travel outside of their town limits for recreational, shopping, and work opportunities, particularly to the high opportunity areas that provide a wider array of good, services, and employers than do many of the small towns and villages in the Region. The high opportunity areas are where job markets, infrastructure, schools, and services are the most extensive and strongest, and include the Randolph area and the greater Hartford/Norwich/Hanover/Lebanon Region along the Connecticut River. Indeed, with respect to jobs, 23.5% of the Region's workforce is employed outside of their respective county of residence. Of those, 21.5% work outside of Vermont altogether (see Figure 13-9). These rates far exceed those seen at the statewide level, largely due to the ease of access to these outside work markets.

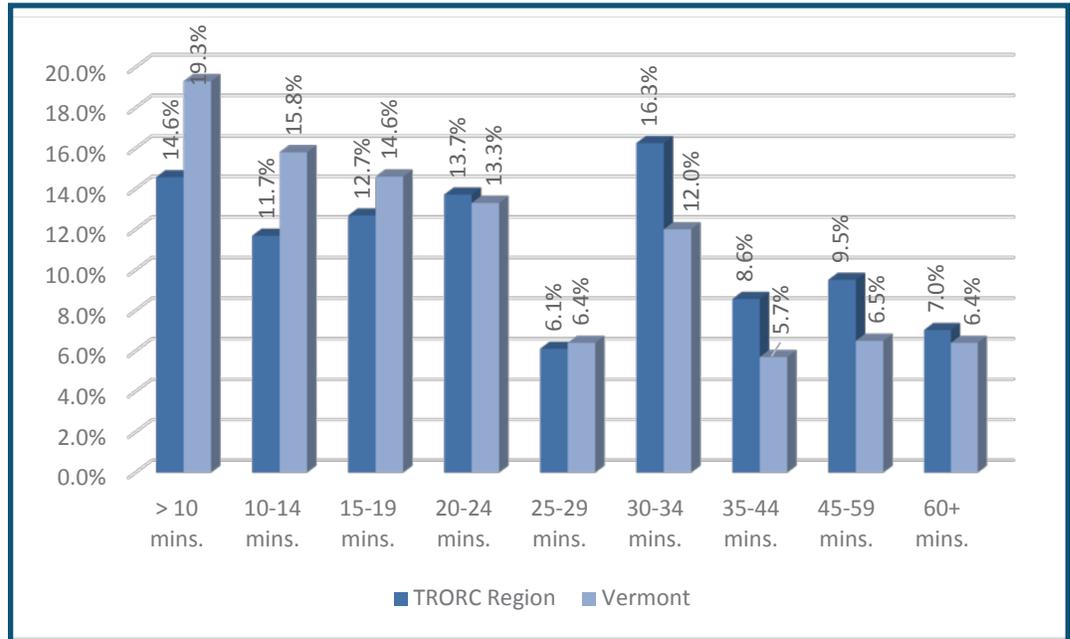
Most towns in the Region are within close distance of major interstate highways that make access to high opportunity areas much easier, allowing many to live further afield from work. This has augmented the trend of extending growth and development away from historical settlement areas throughout the Region, placing added strain on the provision of municipal services and the ability of smaller town and village center businesses to remain viable in some instances. This trend also increases commuting times for many of the Region's workers, even with improved accessibility to major roadways. The average amount of time workers in the Region travel to their jobs is 26.05 minutes, which is roughly equivalent to a 15-20 mile commute in most areas (see Figure 13-10). In fact, 47.5% of all commuters travel over 25 minutes to their

Figure 13-9: Place of Work



Source: *Commuting, 2008-2012 American Community Survey*

Figure 13-10: Travel Time to Work, 2012



Source: Commuting, 2008-2012 American Community Survey

workplace. This constant travel creates additional strain on built infrastructure (roadways and bridges), adds to traffic congestion in areas, and increases pollution to the air, soil, and waterways.

Being able to move to areas outside of traditional village and town centers has opened up more affordable residential opportunities for many in the Region over the past fifty years; however, significant income disparities remain in the Region. Median family incomes increased by 47% in real dollars between 1999 and 2012 for the Region, while median family income levels remain below the state level, according to 2000 Census data and 2012 ACS data. Conversely, the median nonfamily income is higher in the TRO Region than the state, but has only risen 40% in the same time period.

It is important to note that income figures from the Census and ACS do not take the actual level of inflation over time into account. Consequently, the actual purchasing power of peoples' incomes is lower despite the rise in income in real dollars. Calculating these rates, spread over the 13 year period, shows us that these income levels have hovered just above an annual 3.6% and 3% increase (for families and nonfamily households, respectively), while costs of transportation, housing, heating fuel, and other necessities have exceeded those rates in certain years. Families in more of the Region's towns earned less than the regional median family income level in 2012 than they did in 1999, with Braintree and Vershire earning the least per family in 2012 (earning over \$23,000 less than the regional average). Bradford and Bethel,

meanwhile, had median nonfamily income levels that were \$10,000 less than the regional average in 2012. These levels of disparity compound the financial troubles of many who are already cost-burdened throughout the Region.

Major Regional Employers

The TRO Region is home to a number of important business sectors and major employers. As has been noted, two of the largest employment sectors in the Region are education and healthcare. A review of employers that have staff numbers over 100 people supports this, with academic institutions like Vermont Law School and Vermont Technical College and medical centers like Gifford Medical Center and the VA Medical Center being amongst the largest employers. The hospitals, in fact, hire the most people of any two regional employers, according to Vermont Department of Labor data (see Table 13-2). The list of regional employers hiring over 100 individuals also serves to demonstrate that recreation and tourism are key contributors to the regional economy, with Lake Morey Resort, Woodstock Inn and Resort, and the Quechee Club all being large employers. All told, the educational, medical, and tourism employers in our Region are clear anchor institutions within our local economies with respect to job creation and the trickle-down economic boost they provide to other area business as well as municipal and social capital support.

As was highlighted in the 2011 CEDS, the towns of Pittsfield, Hancock, Granville, Randolph, and Bethel saw major employers leave key employment sites since 2000.

These closures include: Stanley Tools in Pittsfield, the Chesapeake Hardwood Products factory in Hancock, the Granville Manufacturing Company in Granville (locally known as the “bowl mill”), the Ethan Allan goods plant in Randolph, and Clifford of Vermont in Bethel. These business closures have contributed to an increase in unemployment figures in these towns, higher than that of the state. Such business closures can also have significant repercussions on neighboring towns as well, particularly when the towns in question are more remote.

E. The Future of Economic Development

A Vision for the Future

Vermont is oft touted as being a great place to both live and work. It boasts the second lowest levels of unemployment in the United States (as of 2014) and plenty of job opportunities in a range of sectors and different skill levels.⁹ The TRO Region is certainly no exception to this rule, and, as such, is well poised to attract newcomers to the Region who seek both fulfilling, rich professional and personal lives.

TRORC recognizes that the Region has a number of unique characteristics that provide the opportunity for a high quality of life. Like other parts of Vermont, it is blessed with a display of mountains, lakes, open fields, and villages. It has a small number of people in rural settings, a clean environment, and access to a variety of natural resource based activities. The Region’s residents have ready access to the natural environment, yet they also

Table 13-2: Regional Employers with 100 or More Employees, 2014

	Town	Industry	Business Name	Number of Employees
Orange Co.	Fairlee	Travel Accom.	Lake Morey Resort	100-249
	Randolph	Junior Colleges	Vermont Tech. College	250-499
	Randolph	Gen. Med. & Surgical Hospitals	Gifford Medical Center	500-999
	Randolph	Other Individual & Family Services	Clara Martin Center	100-249
	Randolph	Religious Orgs.	Bethany United Church of Christ	250-499
	Randolph	Engineering Services	DuBois & King Inc.	100-249
	E. Thetford	Furniture Stores	Pompanoosuc Mills	100-249
	Bradford	Supermarkets	Hannaford Supermarket	100-249
	Randolph	Supermarkets	Shaw's Supermarket	100-249
Windsor Co.	Woodstock	Hotels	Woodstock Inn & Resort	250-499
	Quechee	Golf Courses & Country Clubs	Quechee Club	100-249
	White River Junction	Elem. & Second. Schools	Hartford High School	100-249
	S. Royalton	Junior Colleges	Vermont Law School	100-249
	White River Junction	Gen. Med. & Surgical Hospitals	VA Medical Center	500-999
	Bethel	All Other Plastics Prod. Manuf.	GW Plastics	250-499
	Quechee	Glass Prod. Manuf. Made of Purchased Glass	Simon Pearce US, Inc.	100-249
	Quechee	Business Assocs.	Quechee Lakes Landowners Asn.	100-249
	White River Junction	Specialized Freight	RSD Transportation, Inc.	250-499
	White River Junction	Postal Service	US Post Office	250-499
	Norwich	Other Grocery & Related Prods. Merchant Wholesalers	King Arthur Flour	100-249

Source: Vermont Department of Labor ELMI Employer Database, 2014: <http://www.vtlmi.info/employer.cfm>

have good access to culture, technology, transportation, and other characteristics typically associated with urban life. Many residents fortunate enough to take advantage of this quality of life are committed to extending the same opportunities to others seeking to live in the Region.

While many have often held to the assumption that enticing new large employers is the preferred means of improving the Region's growth prospects, such an approach does not focus on the best source of jobs: small business growth from existing employers. Enticing large new employers also usually involves public subsidies and creates vulnerability in the event of future closure. Instead, it is preferred that the Region focuses on development based on our local assets, and emphasizes the need to help existing small businesses, including cottage industries, grow and flourish. We can also grow local entrepreneurs and attract workers who can telecommute remotely for employers outside of the Region. Given the current shortage of housing, training employees from amongst our current workforce may be easier than attracting outside employees in some cases; however, we also need a concerted effort to attract new working-age adults to augment our aging population.

As noted within the "Major Regional Employers" section of this chapter, higher education and health institutions comprise two of the most significant sectors of our regional economy. Instability of any of these institutions, be it Vermont Technical College, Vermont Law School, Gifford Medical Center, or Dartmouth-Hitchcock

Medical Center, would trickle down to communities throughout our Region, prompting job loss and adverse financial impacts to the towns and businesses that depend on their continued existence. As a Region, it is imperative that we support and retain these and similar anchor institutions for the sake of our continued economic vitality. Efforts should be made to engage and assist these institutions with community dialogue and business continuity planning.

The U.S. Department of Labor produces projections on occupations that are anticipated to see job growth across the country. Per their findings in 2012 (shown in Table 13-3), the following employment areas are projected to grow the most in Vermont by 2020, many in highly skilled job sectors:

It is worth noting that, of the skilled job sectors set to see the most growth, many are not high wage jobs. This fact should not be surprising, as most jobs in the economy are not high wage jobs. Personal care aides and home health aides will be critical to our aging population, but may require supplementary income for workers to affordably live in the Region. Further, as compared with other jobs listed in Table 13-3, it is evident that these are the professions that, compared to others in the listing, require less in the way of educational qualifications.

While focusing on securing jobs in growing employment sectors is important to both retaining residents and to attracting people, we need to ensure that the array of services and housing are securely in place

to support our current and anticipated residents. For example, the child care industry contributes to the regional economy as a business and employer in its own right and as a service industry that provides crucial support to employers and employees. Ample supply of child care

services and facilities allows parents in the regional economy to work, and their importance to the local economy cannot be overstated if we wish to see an influx of workers to the Region. Further, providing increased housing opportunities is critical, especially near job centers.

Table 13-3: Occupations with the Highest Anticipated Growth

Occupation Name	Base Year	Base Job Openings	Projection Year	Projected Job Numbers	Change	Percent Change	Avg. Annual Openings	Median Annual Wage, 2012	Typical Education Needed for Entry
Personal Care Aides	2010	7,970	2020	11,600	3,620	45.4	430	\$19,910	Less than HS
Market Research Analysts and Marketing Specialists	2010	1,170	2020	1,550	390	33.1	70	\$60,300	Bachelor's degree
Home Health Aides	2010	930	2020	1,300	370	40.1	50	\$20,820	Less than HS
Veterinary Technologists and Technicians	2010	420	2020	580	160	37.1	20	\$30,290	Associates degree
Helpers--Carpenters	2010	250	2020	380	130	53.9	20	\$39,940	HS Diploma or Equiv.
Interpreters and Translators	2010	220	2020	280	70	31.5	10	\$45,430	Bachelor's degree
Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	2010	100	2020	140	40	44.9	10	\$28,220	Less than HS
Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	2010	90	2020	120	30	35.3	10	\$49,140	HS Diploma or Equiv.
Biochemists and Biophysicists	2010	50	2020	70	20	35.4	2	\$81,480	Doctoral or professional degree
Biomedical Engineers	2010	20	2020	30	10	50	1	\$86,960	Bachelor's degree

Source: Occupational Employment Statistics program, Bureau of Labor Statistics, U.S. Dept. of Labor, 2012.—does not include all occupations for lack of data or for confidentiality reasons.

A more robust transit system will enable people to access both work and services at much less expense, and increased high-speed internet and cell phone service will draw prospective residents to the Region. Multi-modal and public transit opportunities influence settlement patterns of younger generations as attitudes toward vehicle ownership shift away from car-reliant lifestyle choices that have dominated our culture since the 20th century. This shift has occurred for a host of reasons, ranging from financial considerations to environmental ethical stances. Recent studies on the transportation needs and desires of younger generations of Vermonters,

including current undergraduate students and young professionals, shows that Vermont would be a more attractive place to settle for young adults if there were safe alternative transportation options available, be they well-lit walking and bike paths or more bus and rail services to population and work centers.¹⁰ Additionally, we cannot expect to draw large numbers of younger people if we do not have adequate cellular service. Regional infrastructural improvements will ultimately lead to lower costs of living, increased community vitality, and a wider array of professional opportunities for residents.

Goals, Policies and Recommendations: **Economic Development**

Goals

1. Economic development, community development, and land use policies and plans are aligned to improve the Region's unique quality of life.
2. Essential elements to attracting new, younger residents are in place, including housing that is affordable, ubiquitous telecommunications, transit, and a mix of desirable employment, recreation, and cultural opportunities.

Policies

1. The state and local regulatory systems should foster a predictable, complementary process that promotes desired development and ensures environmental protection.
2. Economic growth that supports and enhances our working landscapes and craftspeople is essential.
3. Public infrastructure shall be planned and funded to support and sustain a viable economy and environment while enhancing quality of life goals, and shall not detract from existing core areas most appropriate for economic development.
4. The Region's capacity to support retention and expansion of existing businesses and the start-up and growth of entrepreneurial ventures must be expanded.
5. The establishment of diversified attractions that expand tourism and recreation opportunities while respecting the Vermont brand are encouraged.
6. Significant increases in the quality and affordability of safe housing for residents—including those with special needs—is necessary, especially within walking distance of transit lines or job/service centers.

Goals, policies and recommendations continued on next page

Goals, Policies and Recommendations: **Economic Development**

Policies (continued)

7. High-speed internet, with fiber-based systems, is supported throughout the Region.
8. Cellular phone networks are supported in all areas of the TRO Region.
9. Transit systems should connect all village and town centers and serve major employment centers and business.
10. Child care facilities in our communities or in employment centers are supported by this Plan.

Recommendations

1. TRORC will provide grant management, Act 250 support, and local regulatory reform assistance to further the development of job growth and workforce housing in areas close to employment and service opportunities.
2. TRORC will participate in discussions to improve the regulatory system at the state level, and improve permitting coordination between local and state levels of government.
3. TRORC will assist towns with village and downtown designation in order to provide incentives in these areas.
4. TRORC will work in concert with towns and development organizations to provide technical support (such as support with permitting, funding, brownfield assistance, etc.) to businesses wishing to stay in or relocate to core areas.
5. TRORC will work with the Vermont state agencies, regional and local development groups, trade associations, Chambers of Commerce, planning commissions and other groups to integrate land use planning with economic planning and development programs based on our Region's assets.
6. TRORC will review and recommend revisions to zoning bylaws and other land-use guidelines to ensure they actively support vitality in town centers, including infill, adaptive reuse of structures, increased height limits, and density bonuses.
7. TRORC will offer assistance to towns in asset management, capital budgeting, and shared services/purchasing in order to lower costs and stabilize taxes.
8. TRORC will assist towns to apply for and manage grants and loans for infrastructure repairs and/or upgrades that bolster the livability of core areas.
9. Public agencies, schools, and private businesses must expand workforce training and education that aligns with the strategic needs of our Region's current and future employers; and expand linkages that allow the Region's youth to learn about local career opportunities and gain exposure to the workplace.
10. TRORC and child care providers must work with member towns to address identified needs for child care facilities or services, including identifying publicly-owned buildings throughout the Region suitable to serve as child care facilities.

Goals, policies and recommendations continued on next page

Goals, Policies and Recommendations: **Economic Development**

Recommendations (continued)

11. Towns, the state, telecommunications providers, and TRORC should map existing cellular and broadband services in the Region, identify gaps, and work to provide coverage in those gap areas, ensuring that all areas have good service that supports both current and future businesses and residents.
12. State, regional, and local economic development agencies should develop stronger financing/funding mechanisms for business expansion and entrepreneurship.
13. The Small Business Development Center, Chambers of Commerce and development corporations should develop a coordinated network of resources for businesses—including business coaching, financing, permitting assistance, and peer-to-peer networking—to equip current and would-be business owners with the skills needed to brand, promote, and effectively operate businesses.
14. TRORC will work with towns and development organizations in the Region to identify and inventory vacant and under-utilized sites/buildings most suitable for near-term commercial and residential development in existing downtowns and villages where water, sewer, power, internet, and roadways have capacity.
15. TRORC should work with local producers, development corporations, educational programs, the Vermont Agency of Agriculture and other organizations to identify and create needed processing, storage, and distribution capacity for locally-made food and forestry products.
16. TRORC will support efforts to recognize businesses for excellence in creating better downtowns and villages, exemplary buildings, energy efficiency, and other activities that further regional goals.
17. TRORC should support and assist efforts that focus on how best to utilize our rivers as economic drivers while improving water quality and protecting the rivers' natural beauty, native animal and plant species, health, and unique character.
18. TRORC should work with land trusts and local conservation commissions to inventory farm and forest lands to understand where parcels are available that could provide opportunities for new farm and forest businesses, and assist towns in crafting regulations to reduce fragmentation and leave land available for farming, forestry, and other land-based businesses.

Economic Development Endnotes

1. Vermont Department of Education, <http://education.vermont.gov/flexible-pathways>. 2014.
2. Vermont Legislative Joint Fiscal Office. “Basic Needs Budget and the Livable Wage.” <http://www.leg.state.vt.us/reports/2013ExternalReports/285984.pdf>. 2013.
3. *Id.*
4. Rockefeller Center at Dartmouth College. “Poverty in Vermont: What We Know and What We Don’t Know.” <http://www.leg.state.vt.us/WorkGroups/ChildPoverty/PovertyinVermont.pdf>. 2010.
5. Vermont Housing Finance Agency. “Between a Rock and a Hard Place, Housing and Wages in Vermont.” <http://www.vhcb.org/pdfs/housing-wages-2011.pdf>. 2011.
6. “Gov. Shumlin Announces ‘Great Jobs in Vermont’ Campaign.” <http://governor.vermont.gov/newsroom-great-jobs-press-release>. 2014.
7. Vermont Transportation Board. “Getting Millennials from A to B.” http://tboard.vermont.gov/sites/aot_transportation_board/files/2014%20Annual%20Report.pdf. 2014.