

2014 Vermont Non-residential Telecommunications Survey Report

Prepared for the Vermont Public Service Department

by the Castleton Polling Institute
Castleton College
6 Alumni Drive
Castleton, Vermont 05735

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CASTLETON POLLING INSTITUTE

Amplifying the Voices of Vermont



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Introduction

The Polling Institute at Castleton College conducted two independent surveys for the Vermont Public Service Department to measure the public's use of and satisfaction with telecommunications throughout the state. The surveys covered a wide array of issues, including internet, television, cell phone, and traditional landline phone access. The data considered in this report are from the survey of nonresidential organizations.

From June 9 to June 19, 2014, the Castleton Polling Institute surveyed a random sample of Vermont businesses and other nonresidential organizations to assess their current usage of and satisfaction with telecommunications in the state. The sample was drawn from the databases of Dunn & Bradstreet and stratified by business size so that large and small businesses are represented proportionately such that the distribution by size of organizations in the sample match that of the state. The sample was also designed to include all of the major industry sectors represented in Vermont, using the North American Industry Classification System (NAICS) codes as a means of broadening representation. The final sample included 605 completed interviews, representing businesses from all 14 counties in Vermont, and 22 industry sectors.

Summary results

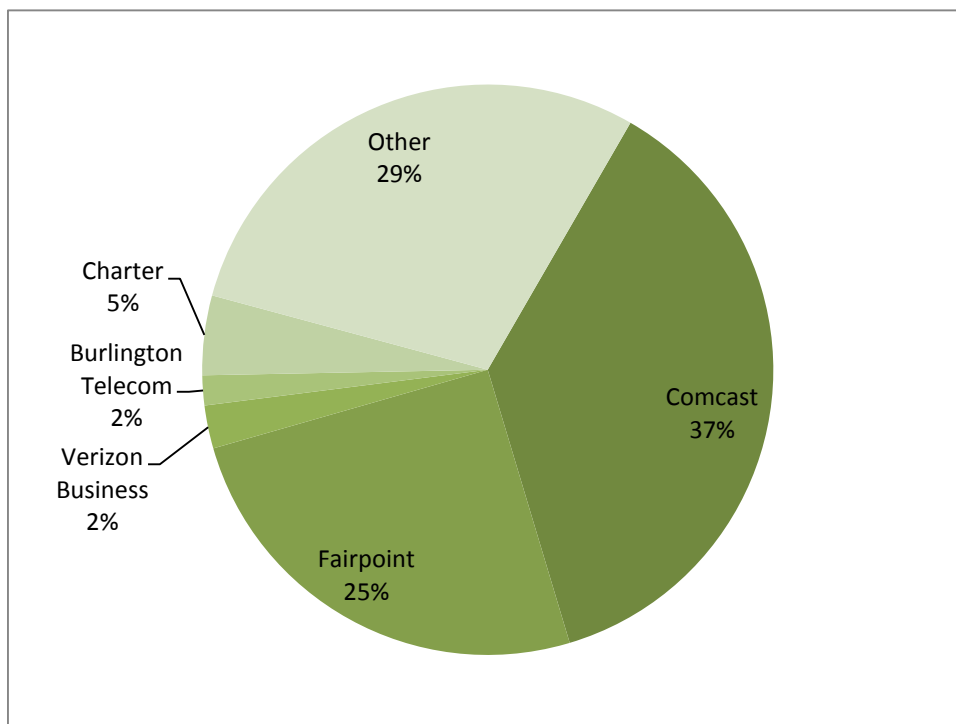
- Whereas the 2012 Vermont Telecommunications Survey Report found that 93 percent of nonresidential respondents had Internet connection at their place of business, that value has risen to 97 percent in 2014. In addition, the extent to which those connections are broadband access has also increased from 83 percent in 2012 to 92 percent in 2014.
- Traditional landline telephones still dominate the voice communications market for Vermont businesses; 96 percent have a landline either in lieu of or in addition to cell phone service.
- More than half of Vermont businesses subscribe to cell phone service, although most also have landline service as well. Larger organizations are more likely to use cell phones in addition to landline service.
- While almost half of all nonresidential survey respondents believe that it is fair for all customers to be charged a fee to support the expansion of broadband Internet service in rural areas, only 35 percent believe that telephone rates should increase for all customers to cover the higher costs of rural phone service.
- Overall, nonresidential respondents estimate their total monthly telecommunications costs to be \$621.30 on average, although half of the surveyed organizations reported spending \$200 or less per month.

Internet Service

Nearly all Vermont businesses (97 percent) have access to the Internet at their business location. As with residential customers, the most prevalent providers of Internet access to businesses are Comcast (37 percent) and FairPoint (25 percent). Ninety-two percent of these organizations connect to the Internet with a high-speed or broadband connection, primarily through DSL (43 percent) or cable (36 percent). Only 4 percent of the nonresidential survey respondents connect to the Internet with a T1 or DS1 line.

Both the overall level of connectivity to the Internet as well as the rate of connectivity by broadband is up from the 2012 survey by 4 percentage points for connectivity and 9 percentage points for broadband among those connected.

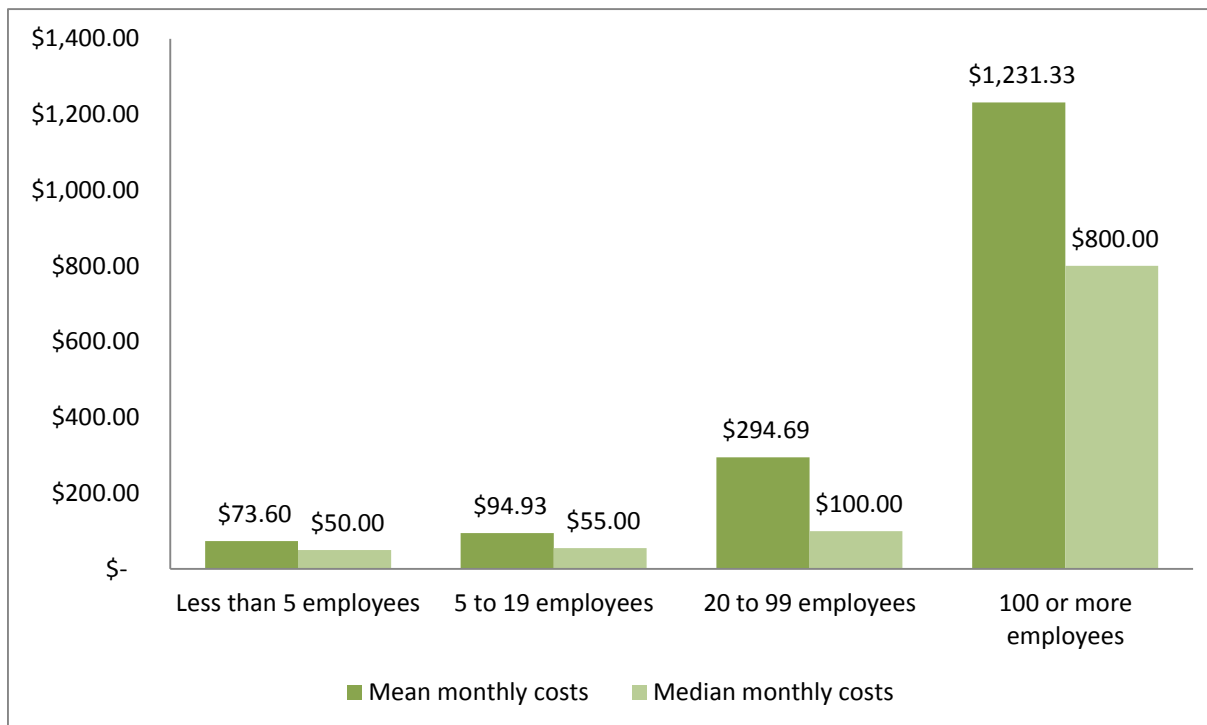
Figure 1. Providers of Internet service to nonresidential consumers



It should not be surprising that the median monthly amount that non-resident organizations pay for Internet connection is identical to the residential median amount (\$60) because the majority of businesses in Vermont employ fewer than 5 people; the modal response (\$40) is also the same as that for residential customers. The average (mean) cost for businesses, however, is \$159.19 due to the much higher monthly rates paid by larger organizations, as illustrated in Figure 2.

Only 14 percent have a secondary internet connection at their business location, a plurality of which (27 percent) is provided by Comcast.

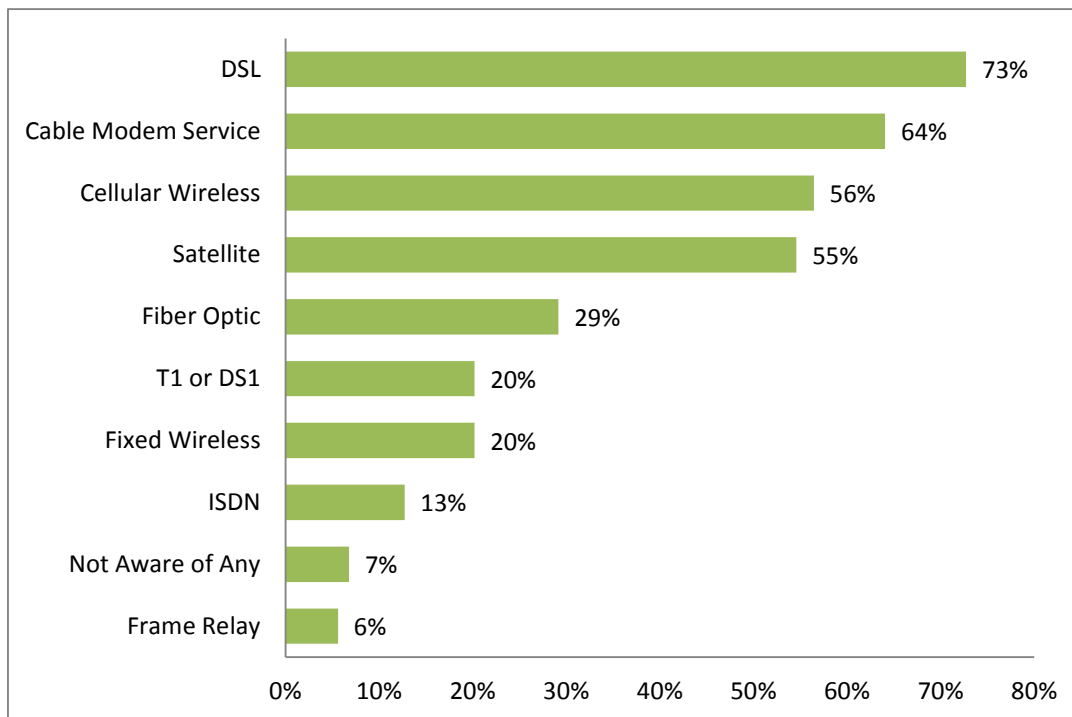
Figure 2. Mean and median monthly Internet service costs for nonresidential customers



Most nonresidential customers are aware of the availability of DSL (73 percent), Cable (64 percent), Cellular (56 percent), and Satellite (56 percent) in their area, but far fewer are aware of fiber optic (29 percent) and the availability of T1 or fixed wireless (20 percent). Figure 3 illustrates the comparative awareness of ways to connect to the Internet from the business location.¹

¹ It is important to note that “awareness” may not reflect the reality of access to the Internet. It is possible both for organizations to be “aware” of option that do not exist and to not be aware of options that do exist. This is a measure of perception.

Figure 3. Awareness of other connection options among nonresidential customers



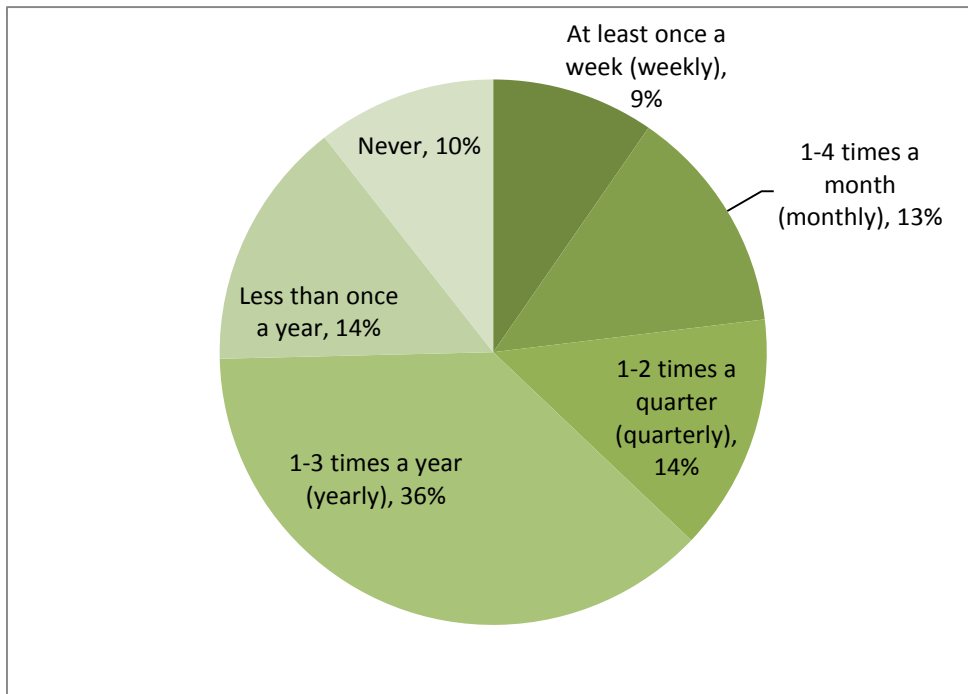
A plurality of respondents (43 percent) believe that upload and download speeds are equally important for their work. Forty-one percent believe that download speed is more important, and only 10 percent believe that upload speed is more important. It appears that concern for upload speed has increased slightly since 2012, where 47 percent touted the importance of download speed without equal regard for upload speed.

Nearly a quarter of all nonresidential respondents (23 percent) cited satisfaction with their current service as the most important reason that they do not switch to faster connections to the Internet. The second most prevalent reason is the cost (19 percent) followed by the perception that there is no faster service available (17 percent).

The 2014 survey asked respondents what factors would be most important in deciding whether to switch Internet service providers. Among reliability, cost, and connection speed, reliability is the most important factor for nonresidential customers, ranked first in importance by 72 percent of survey respondents; 20 percent ranked cost first, and only 8 percent ranked speed as the most important factor. In fact, speed was ranked third by 48 percent of nonresidential respondents.

Nearly one quarter of nonresidential customers say that they experience interruptions in service either never (10 percent) or less than once a year (14 percent). At the other extreme, 9 percent say that they experience service interruptions at least once a week. Respondents' estimations of service lapses in 2014 are down slightly from what was reported in 2012.

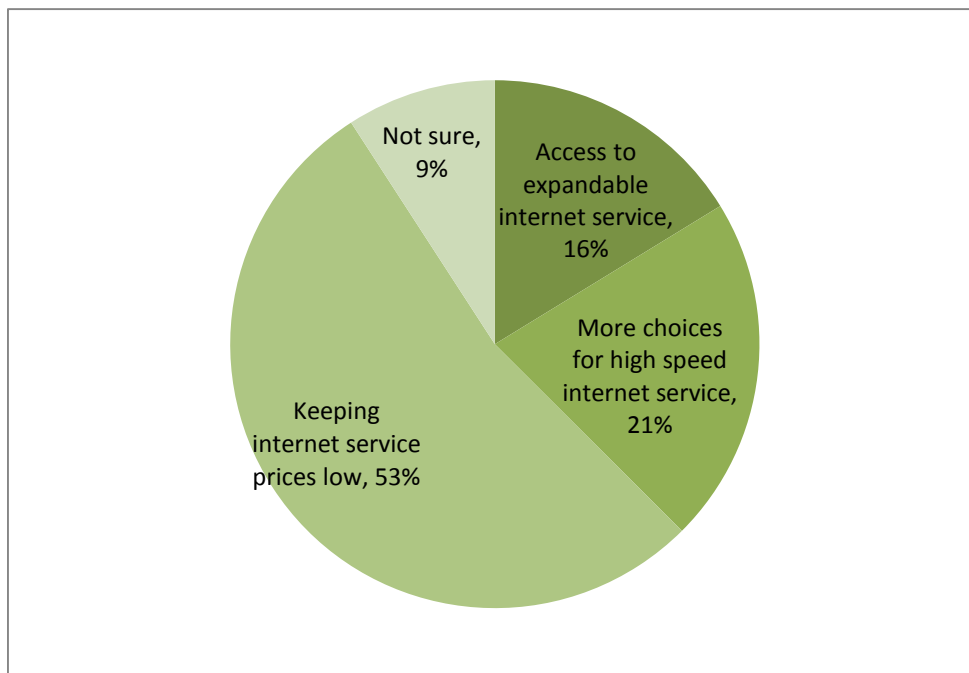
Figure 4. Frequency of service interruptions



Regardless of the number of times nonresidential customers have experienced lapses in service, they tend to rate the reliability of their Internet service very positively. Nearly three-quarters of those surveyed (73 percent) said that their service was very reliable, and another 21 percent said that their service was somewhat reliable. Only 4 percent said their service was either somewhat unreliable (3 percent) or very unreliable (1 percent).

Businesses most commonly cite cost as more important to the future of their business than higher speed or expandable Internet options, as Figure 5 clearly illustrates.

Figure 5. Internet option most important to company's future



On average, Vermont businesses report 74 percent of their workforce uses email at work. The mean value, in this case, belies the fact that for a majority of businesses (63 percent), all of their employees use email at work, and for eight percent of businesses, no employees use email.

The Internet is very important to Vermont businesses for both connecting to customers and to other businesses. Seventy percent of Vermont businesses say they have a website, although the level falls to 67 percent for Central Vermont and 62 percent for businesses in the Northeast Kingdom. The majority of websites (65 percent) are used by both the public and internally; only a third (33 percent) are used only by the public, and just 2 percent are exclusively for internal use.

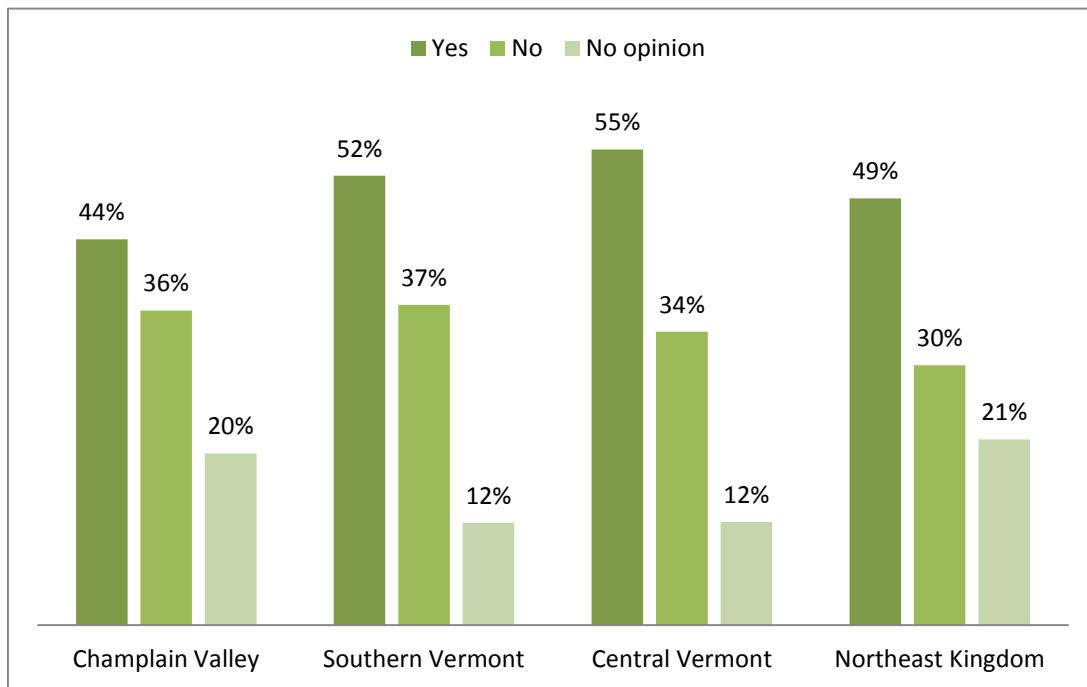
Despite the fact that the public can access 98 percent of business web sites, only 28 percent are set up to allow customers to make purchases online. Of course, the percent of websites that allow customers to make purchases differs greatly by industry classification. Among wholesale trade respondents, 56 percent of the web sites allow customers to make purchases, and among retail trade respondents, 43 percent of the websites are set up for customers to make online purchases.

Eighty-eight percent of businesses purchase materials and services online. Those businesses that do purchase online make on average 39 percent of their purchases online; 71 percent of Vermont businesses overall make zero to less-than-half of their purchases online.

Nearly half of the survey respondents (49 percent) believe “it is fair for everyone to be charged a universal service fee to support expansion of broadband service in rural areas.” Thirty-five percent of all

respondents believe it is not fair, and 15 percent would offer no opinion on the matter.² Respondents in the Champlain Valley were the least likely to believe such a service fee is fair (44 percent); the figure below illustrates the regional differences.

Figure 6. Belief that it is fair to charge everyone a universal service fee to support expansion of broadband service in rural areas, by region



Only 7 percent of businesses subscribe to a video service, half of which use an Internet-based service, followed by a cable or fiber-based service (39 percent of video service subscribers).

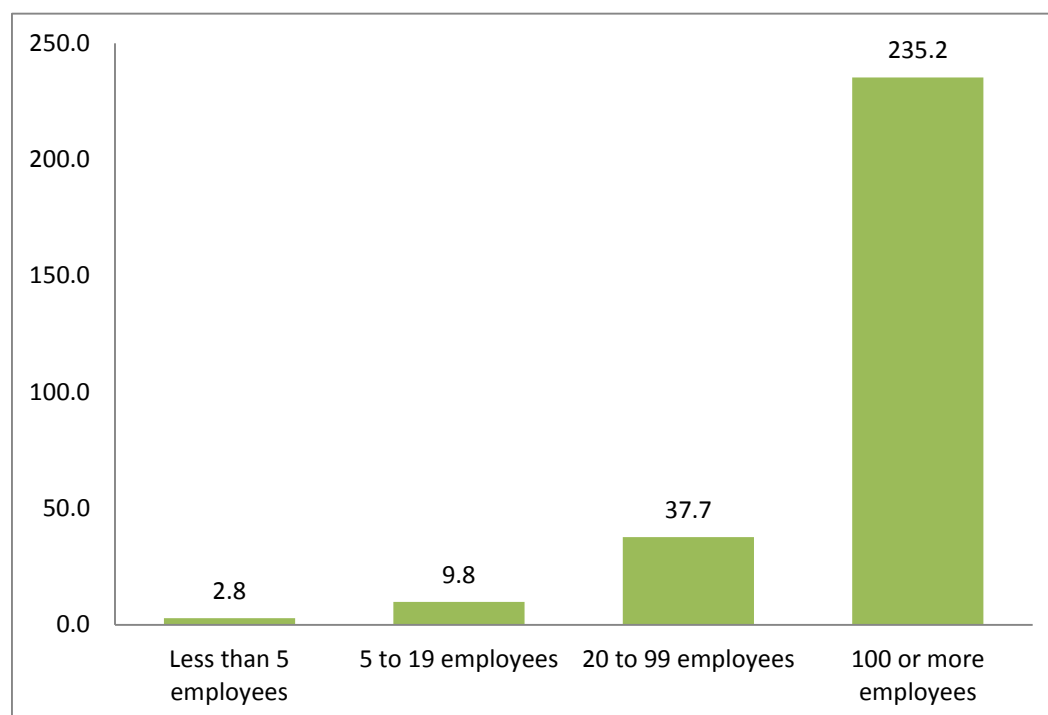
In the event of a lapse in Internet service, only 13 percent of the survey respondents report having a secondary Internet service provider. For those with a secondary provider (n=74), 46 percent rely on a cell phone data service.

² These percentages, like those in Figure 6, do not add to 100 percent due to rounding errors.

Landline Telephone Service

On average, nonresidential survey respondents have 19 telephone extensions at their place of business, but naturally, the number of extensions varies significantly by the business size, with an average of 2.8 for businesses with less than 5 employees, and 235 for businesses with 100 or more employees.

Figure 7. Average number of telephone extensions, by company size



As with residential customers, FairPoint is the most prevalent provider of landline service to businesses, providing service to 43 percent of our nonresidential respondents. The next most prevalent provider is Comcast, with 24 percent of the market. The marketshares for FairPoint and Comcast among nonresident customers remains fairly consistent with the values reported in the 2012 survey (44 and 21 percent, respectively).

In response to what other providers are available in their area, 39 percent of respondents could not name another provider, and 37 percent could name only one other; 17 percent could name two other providers, and five percent could name three. On average, respondents could name one other provider. The most common provider named was FairPoint (by 40 percent of respondents) followed by Comcast (29 percent).

A majority of businesses (66 percent) have no contract with their landline service provider; they simply pay month-to-month with neither an obligation to keep nor penalty for dropping the service. The rate of those who report having such a contract is higher in the 2014 survey (27 percent) than in the 2012 survey (18 percent). Only 6 percent of the nonresidential survey respondents are considering changing

their primary telephone service provider to an Internet-based provider, such as Skype or Vonage, and only 3 percent are considering switching their primary phone provider to a cell phone service.

When considering whether to switch service to another provider, 43 percent ranked the service quality as the first consideration, and 40 percent ranked price as the first consideration; only 17 percent ranked customer service as the first consideration. The relative importance of these three factors is illustrated in the following figure.

Figure 8. Relative importance of factors involved in deciding to switch telephone providers



Despite the fact that few respondents have plans to switch providers at the time of the survey, one in five (20 percent) say that they have switched providers in the last three years. Among companies with 100 or more employees, however, only 11 percent have switched providers in the last three years. Of those who have switched providers (n=114), 35 percent say that they would consider going back at some point.

About one third of the survey respondents (34 percent) say that their organization has a secondary provider for telephone service in case of an outage. The prevalence of having a secondary provider does not increase with the size of the organization; 37 percent of those with less than 5 employees and 36 percent of those with 100 or more employees have a secondary provider. For the vast majority with a secondary provider (86 percent), the secondary service is a cell phone service provider.

A large majority of nonresidential customers (74 percent) have a service package that sets a fixed rate for all calls, including long distance. Only 18 percent have a plan that charges per-minute tolls that vary.

Overall, 29 percent of respondents say that it is very important to have the entire state as their local calling area; however, for respondents in the Northeast Kingdom, it is very important to 41 percent.

Figure 9. Importance of having the whole state as a local calling area

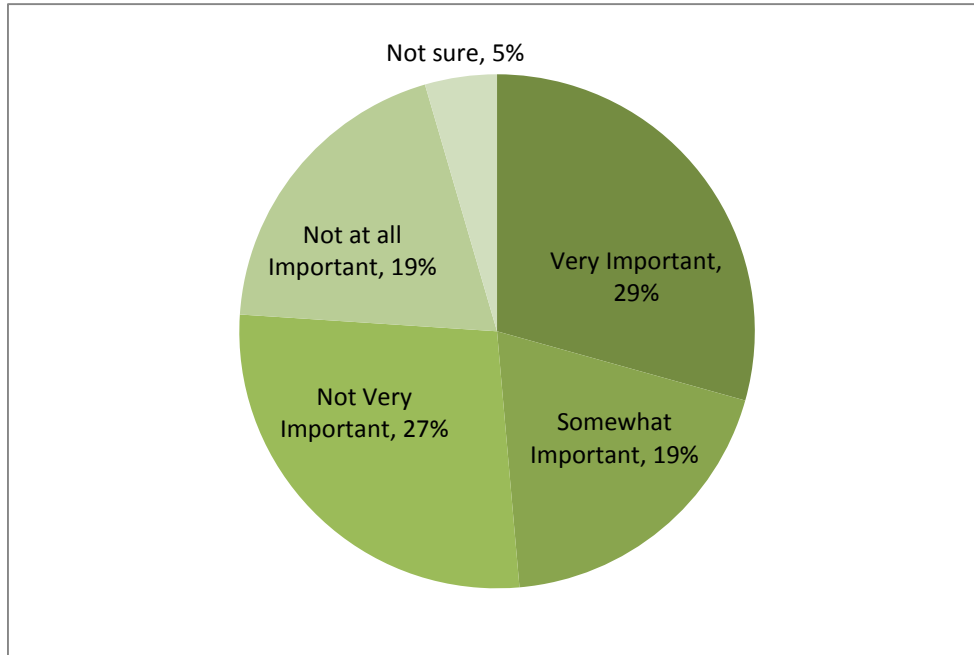
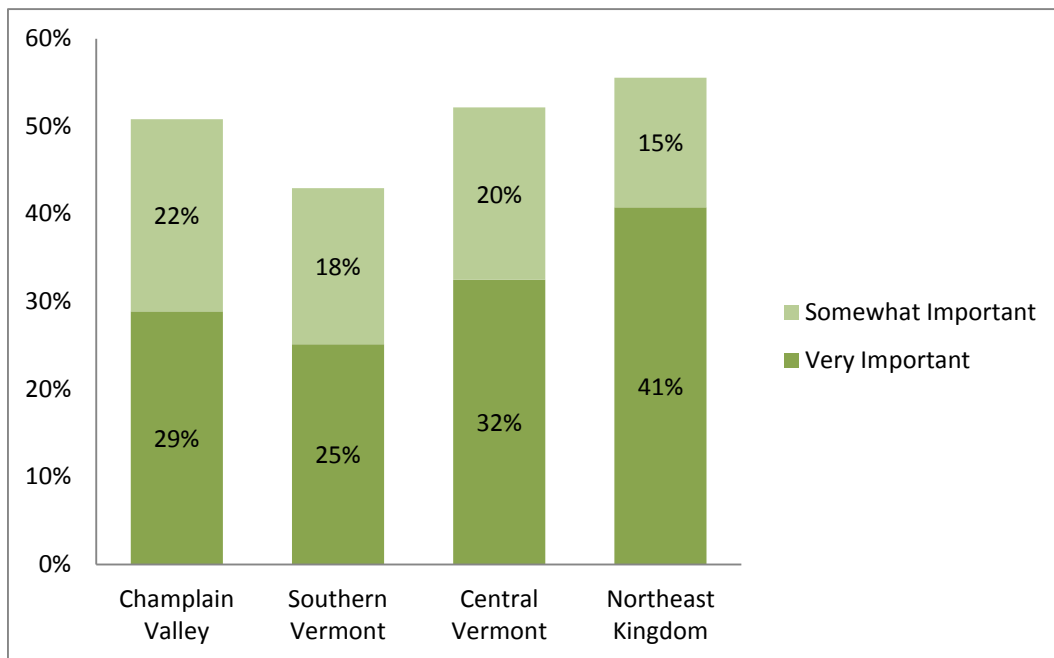


Figure 10. Importance of having the whole state as a local calling area, by region



As in the 2012 survey, despite many respondents expressing the importance of having the entire state as a local calling area, few are willing to pay more for it. Only 22 percent say that they would be willing to pay more for local service in order to have the whole state as a local calling area, although 44 percent of those for whom having the entire state as a local calling area is *very important* are willing to pay more for local service.³

³ The 2012 survey reported similar findings.

About a quarter of those willing to pay more (n=128) will pay \$9 per month above what they currently pay; 10 percent are willing to pay \$6 more, and 26 percent are willing to pay \$5 more. In other words, 60 percent are willing to pay \$5 or more per month to have the entire state as their local calling area.

Table 1. Amount extra that nonresidential customers are willing to pay to have the entire state as a local calling area, among those willing to pay⁴

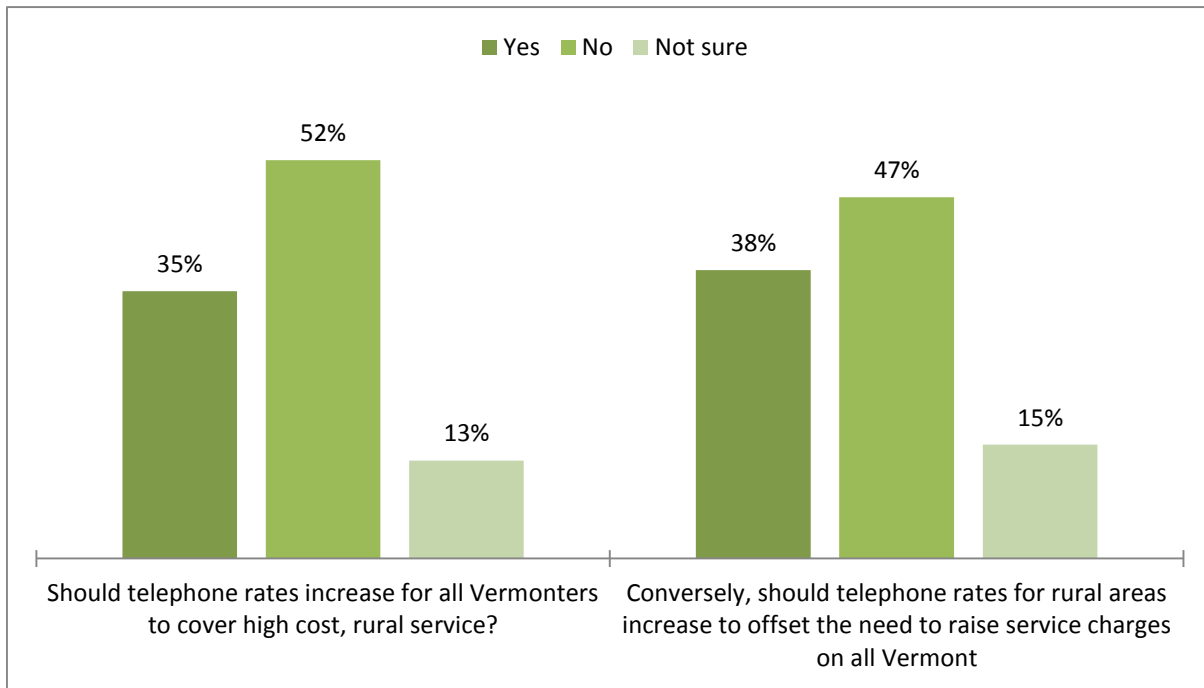
Extra per month	2012	2014
9 dollars	21%	24%
6 dollars	9	10
5 dollars	37	26
4 dollars	9	4
3 dollars	8	5
2 dollars	4	2
1 dollar	3	4
50 cents	-	3
Nothing	1	5
Not sure / Refused	6	17

On average, respondents say that they are willing to wait on the phone as long as 4.9 minutes to speak to a customer service representative when calling their telephone service provider. The median time to wait for a representative on the phone is 4 minutes. A plurality of respondents (43 percent) say that it is reasonable to wait a day (24 hours) for a line in need of repair to be fixed before the wait becomes unacceptable, but the average response was 18.2 hours.

While a majority of nonresidential survey respondents say that it is either very important (32 percent) or somewhat important (28 percent) for the state to fund high-cost rural service, a smaller majority (52 percent) do not think that it is fair for all rate payers to pay higher rates to cover the high cost of rural service. Phrased differently, a plurality (47 percent) does not think that the rates for rural areas should be increased due to the relatively higher costs of providing that service. It seems that respondents want the state to address the need for providing service to rural organizations, but they do not want the costs passed on to themselves.

⁴ Given the small sub-sample sizes for the number of organizations willing to pay more to have the entire state as a local calling area, the differences between the 2012 and 2014 surveys are not significant.

Figure 11. Opinions about who should bear the cost of providing rural telephone service

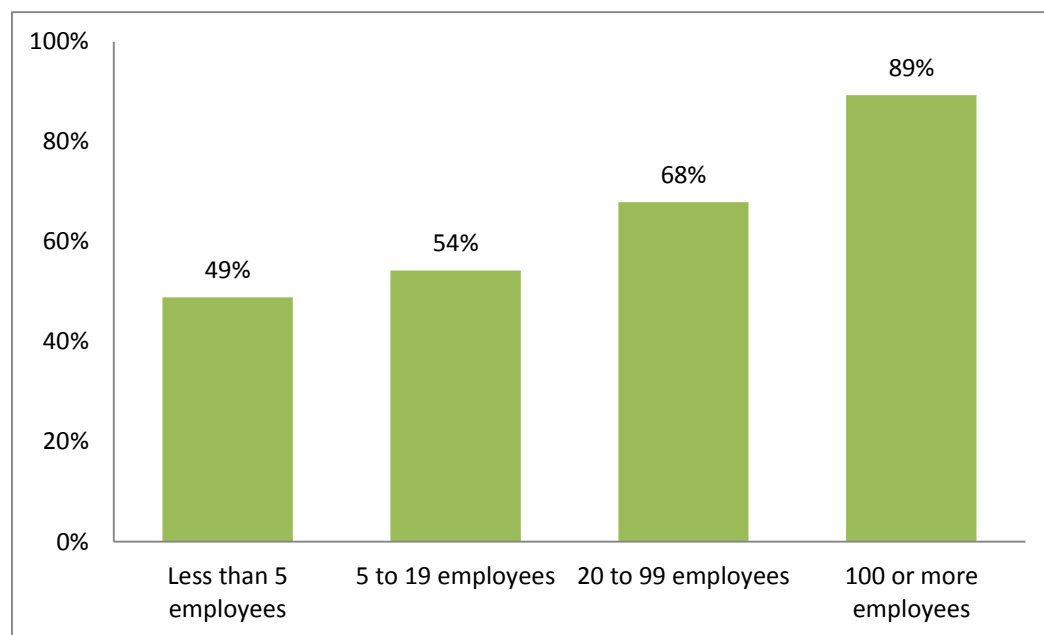


Only seven percent of the companies surveyed use a virtual private branch exchange (virtual PBX) at any of their locations. Naturally, the virtual PBX systems are more common among larger companies, with 25 percent of those with 100 or more employees using those systems.

Cell Phone Service

A majority of nonresidential respondents (54 percent) subscribe to a cell phone service for their organization. The 2012 survey found 57 percent of nonresidential respondents have cell phones—a difference that is well within the margin of error—so we might conclude that there has been little if any change in the use of cell phone among Vermont businesses. Having cell phone service is most common in the Champlain Valley (58 percent) and least common in the Northeast Kingdom (45 percent). As the following figure illustrates, it is also more common among larger organizations.

Figure 12. Percent of organizations subscribing to cell phone service, by number of employees



Of those organizations with cell phone service (n=310), 73 percent make half or less than half of all of their organization’s calls from cell phones, although nine percent make all of their calls on cell phones. On average, organizations with cell phone service make 40 percent of their calls from cell phones rather than landlines. Consequently, the vast majority of calls from nonresidential customers are still made on traditional landlines.

Organizations with cell phone service have 8.7 cell phones on average. While 26 percent of those organizations have only one cell phone and 23 percent have just two cell phones, the largest number reported by an organization is 285, pulling up the average for all organizations. The median number of cell phones is three and the modal number is one. Naturally, the average number of cell phones for organizations increases as the number of employees increase such the average for that organizations with less than five employees is 2.4 , and for organizations with 100 or more employees it is 54.

While it was not common for organizations to have a contract for landlines that set a cost over a period of time, contracts are the norm for cell phones. Seventy-one percent of organizations with cell phones

have a fixed contract; in 2012, 74 percent had such contracts. Only about 6 percent use a pre-paid service for their cell phones.

As in the 2012 survey, the two most common cell phone providers for nonresidential customers are AT&T (48 percent) and Verizon (48 percent). Sprint PCS provides service to about 4 percent of the survey respondents, and US Cellular and Tracphone each provide service to 3 percent of nonresidential organizations. Other providers account for service provided to 4 percent of all businesses.⁵

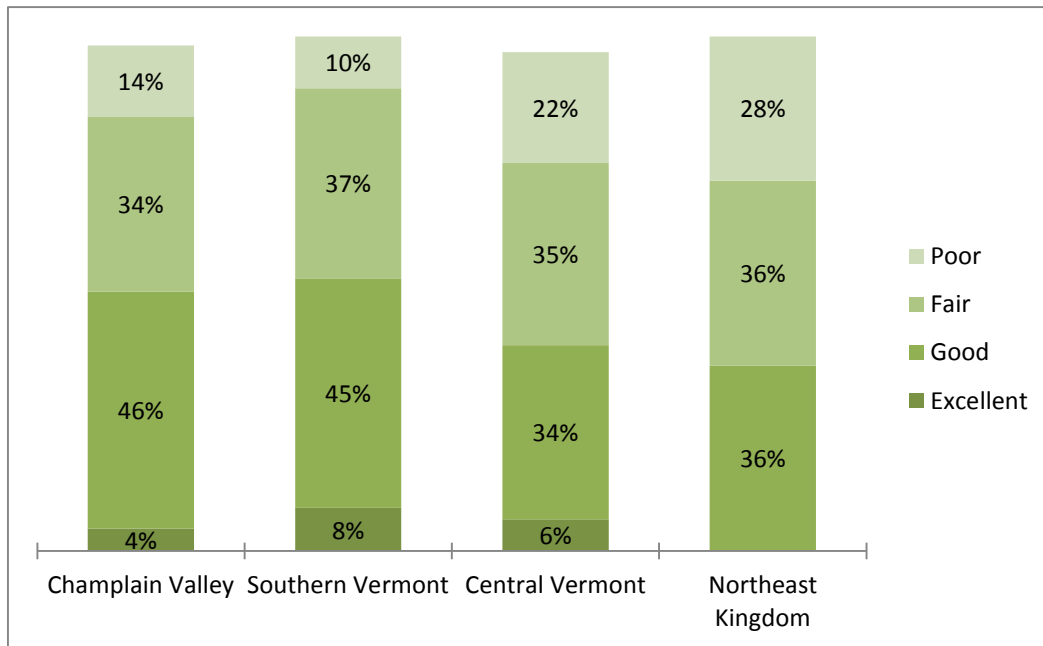
Most nonresidential cell phone customers receive a signal for their cell phones at their business location, although 10 percent say that the signal only works outside. Seventy-seven percent can receive a signal indoors at their place of business. Eleven percent receive no signal at their place of business.

All of the plans purchased by nonresidential organizations include voice, and 90 percent include texting service as well. Eighty-one percent of the plans also include data.

In general, nonresidential customers do not rate cell phone coverage across the state very highly. Half of all respondents said that coverage was either fair (35 percent) or poor (15 percent), while nearly as many rate service as excellent (6 percent) or good (42 percent). Opinions about the level of coverage vary by region, with those from Central Vermont and the Northeast Kingdom rating coverage lower than organizations from the Champlain Valley or Southern Vermont, as illustrated below.

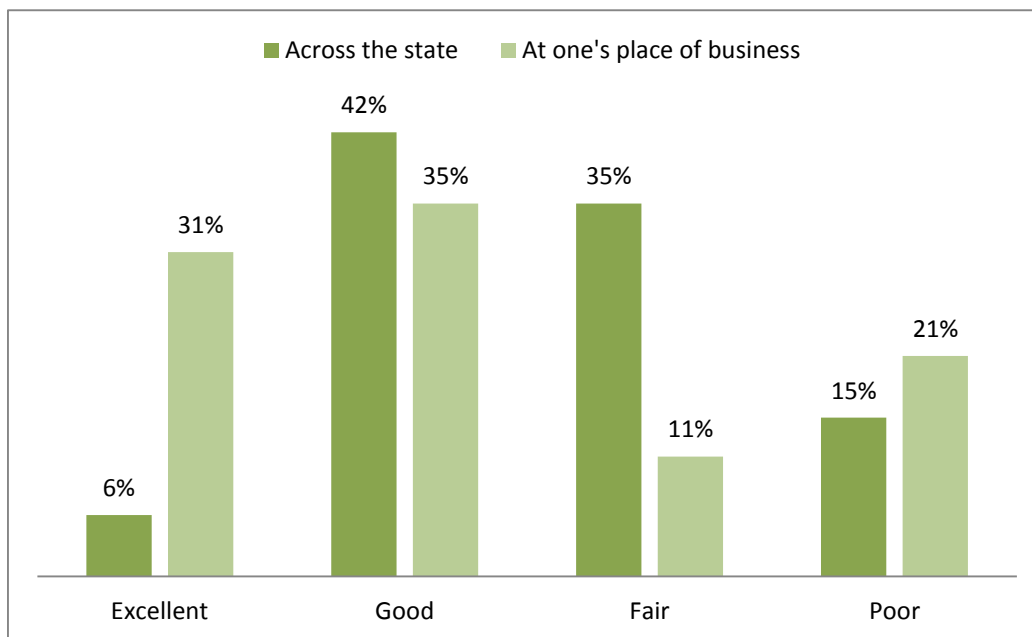
⁵ The number of providers exceeds 100 percent because 25 organizations get service from multiple providers. In addition, while the values differ from the 2012 survey by as much as 10 percentage points, the margins of error in both surveys are much higher for this question due to the size of the sub-sample of cell phone customers among nonresidential respondents.

Figure 13. Rating cell phone coverage across the state, by region



Nonresidential organizations rate the cell phone coverage at their place of business, however, much better than they rate coverage across the state. A clear majority rate cell phone coverage at their place of business as either excellent (31 percent) or good (35 percent). Opinions about cell phone coverage at one's place of business vary more dramatically, as 21 percent rate that coverage as poor.

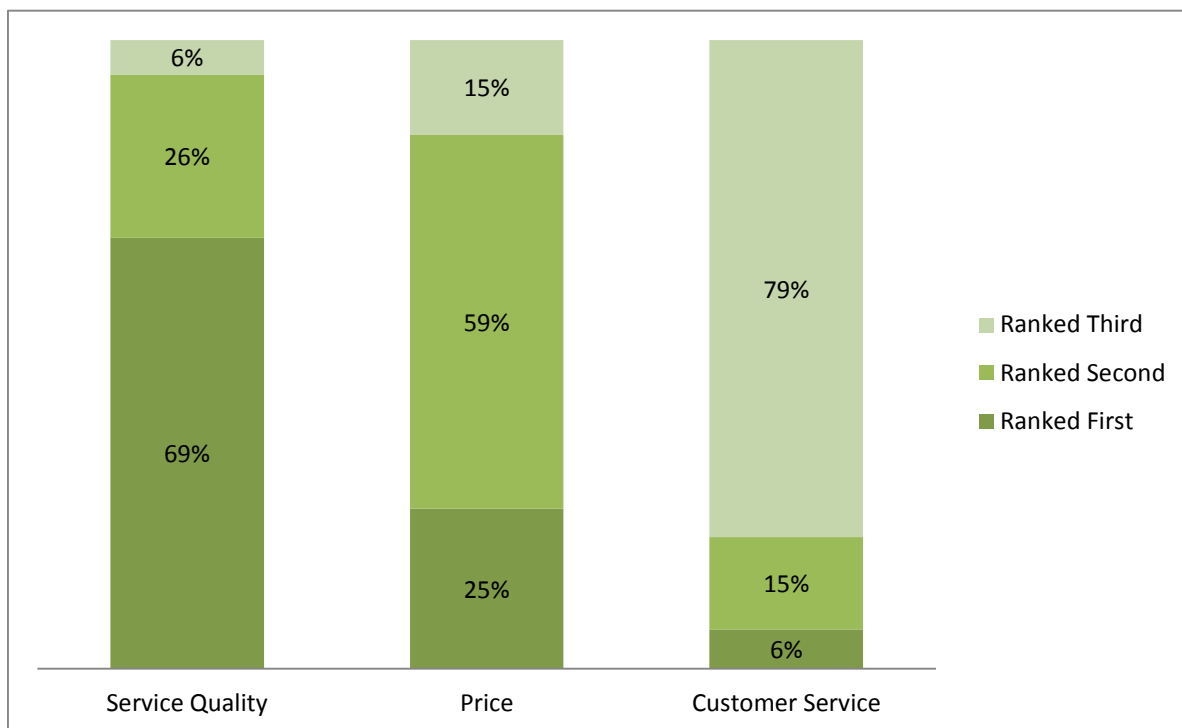
Figure 14. Rating cell phone coverage across the state and at one's place of business



A majority of cell phone customers (58 percent) believe that cell phone service is as reliable as landline service *where it is available*; 40 percent say it is not as reliable. Those in the Northeast Kingdom are even more likely to say that cell phone service is as reliable as landlines, with only 16 percent saying it was not.

As with landlines, respondents ranked service quality as the most important factor that may lead them to change to another cell phone company, followed by price, and lastly customer service—79 percent ranked customer service third most important.

Figure 15. Relative importance of factors involved in deciding to switch cell phone providers



Thirty-one percent say that they have used a telephone service provided by a cable company. Of those, 85 percent used Comcast for the service. Fewer people (19 percent) have used a nomadic VoIP service to make calls. A majority of those who have used nomadic VoIP rate the service quality as either excellent (22 percent) or good (39 percent). A majority (51 percent) rate the price as excellent and another 21 percent rate the price as good. Users of nomadic VoIP, however, do not rate customer service very highly (see Figure 16 below). A majority (58 percent) have used video chat through nomadic VoIP.

Figure 16. Rating service quality, price, and customer service of nomadic VoIP

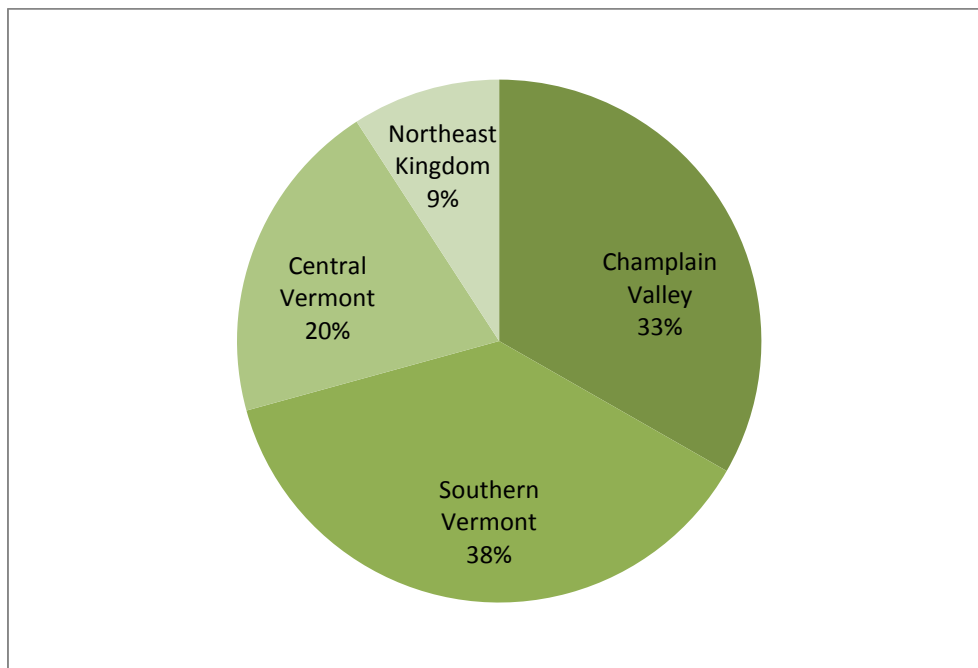


Sample Demographics

The average amount that Vermont businesses spend per month on telecommunications is \$621.30, with a median amount of \$200. Large organizations—those with 100 or more employees—spend an average of \$7,815.63 per month in telecommunications, with a median value of \$2,650.

The data used in this report are not weighted, representing the researchers best estimate of the state’s business universe through random sampling. Organizations included in this survey represent all 14 Vermont counties. Figure 17 illustrates the regional distribution.

Figure 17. Unweighted regional distribution of surveyed organizations



For 94 percent of the organizations surveyed, their primary location is in the state of Vermont, and the average number of locations for each organization is 1.55. One third of those surveyed are home-based businesses. For 65 percent of the organizations, the people that they serve are mostly in Vermont, but for 15 percent, the people served are mostly outside of Vermont. Seventeen percent of the businesses surveyed serve about an equal number of people inside and outside of Vermont.

The majority of nonresidential respondents (59 percent) in our survey are small businesses with fewer than 5 employees. The U.S. Census Bureau’s “2012 County Business Patterns” estimates the percent of businesses in Vermont with fewer than 5 employees in 2012 to be 57 percent, or 12,081 businesses.

Figure 18. Distribution of surveyed organizations by size

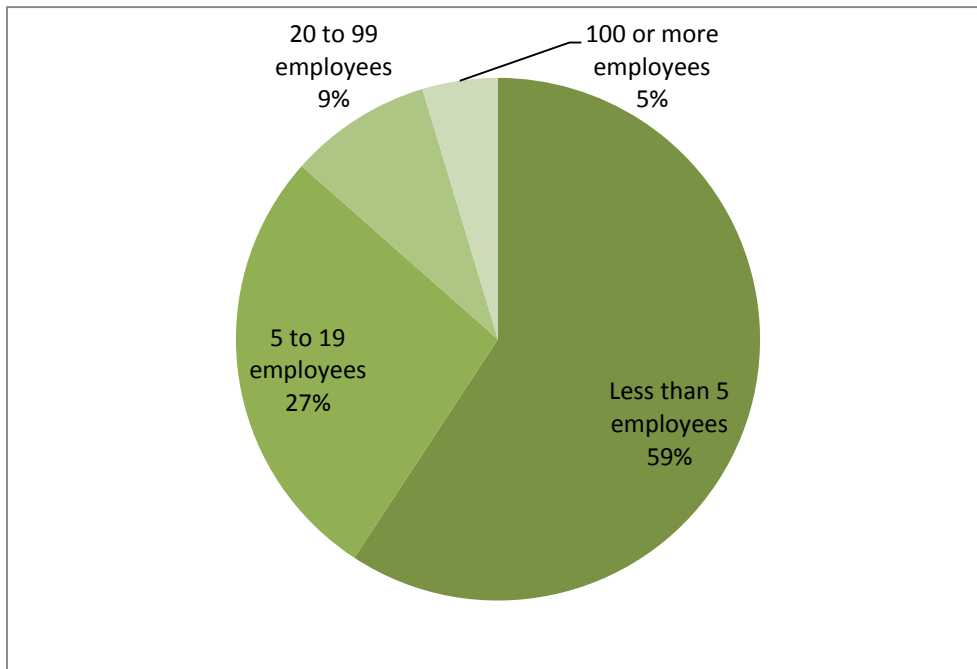


Figure 19. Comparison of survey sample and U.S. Census estimates of Vermont businesses, by size

