



Broadband Impacts on Employment





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Key Findings

Broadband Adoption Benchmarks:

- Adults in Kentucky with broadband Internet access at home: 44%
- U.S. Comparison (Pew Internet & American Life Project, Mar. 2007) 47%

Key Findings: Online Job Searches

- Almost one-third (31%) of adult residents access the Internet for job searching and employment information, up significantly from 16% observed in 2005.
 - Nearly half (49%) of residents with broadband service at home report using the Internet to search for employment.
- Over one-quarter (28%) of adult residents who search for employment online report that they found a job in this fashion. This translates to approximately 280,000 jobs filled. Of these, two-thirds were filled by residents with broadband service.
- With broadband at home, the majority of unemployed residents and one third of disabled residents use the Internet for job searching.



Key Findings

Key Findings: Telework Habits and Potential

- Among employed residents with a broadband connection at home, 11% (or about 110,000 workers) report that they **regularly** work from home through their broadband connection. These individuals comprise 6% of all employed adults, but another 23% of workers are interested in teleworking.
- Among adults who are not employed in the labor force today, one-quarter say they would be likely to work if they could work from home through a broadband connection.

Key Findings: Working At Home Online

- Apart from a formalized telework arrangement described above whereby workers **regularly** work at home through their broadband connection, the survey also finds that nearly one-third (32%) of employed adult residents use the Internet to do some work from home.
- Working from home is most strongly associated with high income and highly educated workers and those who have laptop computers.



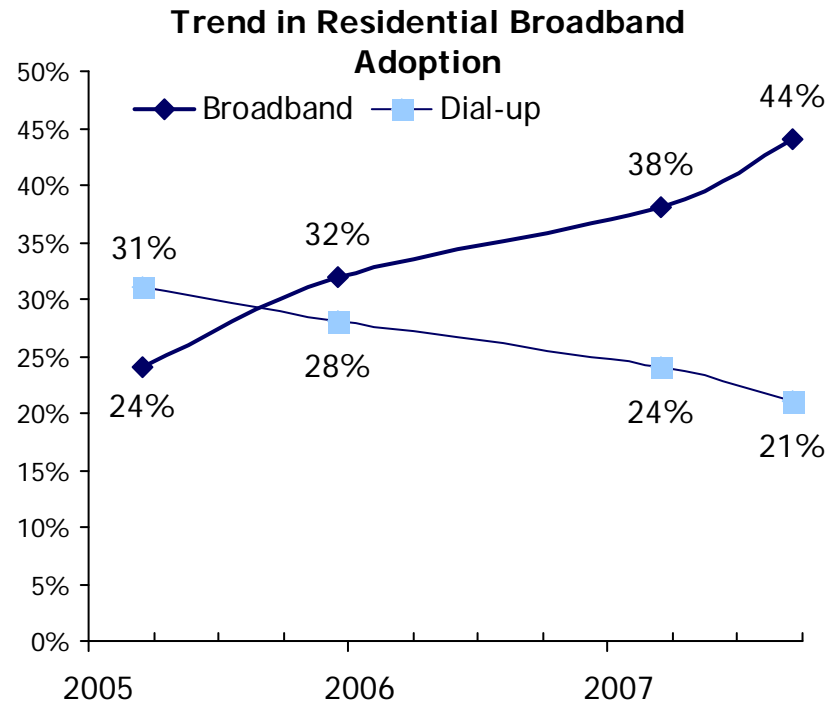
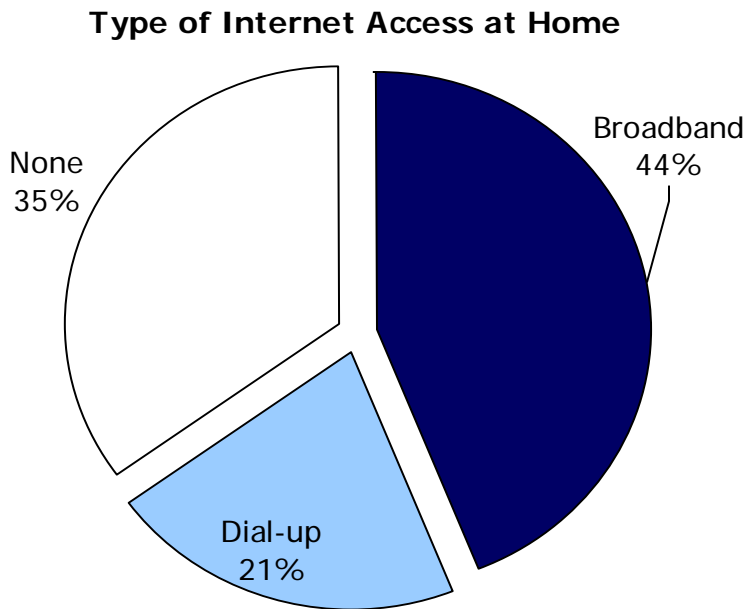
Statewide Broadband Adoption and Utilization Benchmarks





Broadband Adoption

- The share of households that has adopted broadband has risen to 44%, up from just 32% near the end of 2005. In absolute terms, this converts to approximately 1.4 million adult residents and 720,000 households.
- Just over 20% of adults are using dial-up service at home.



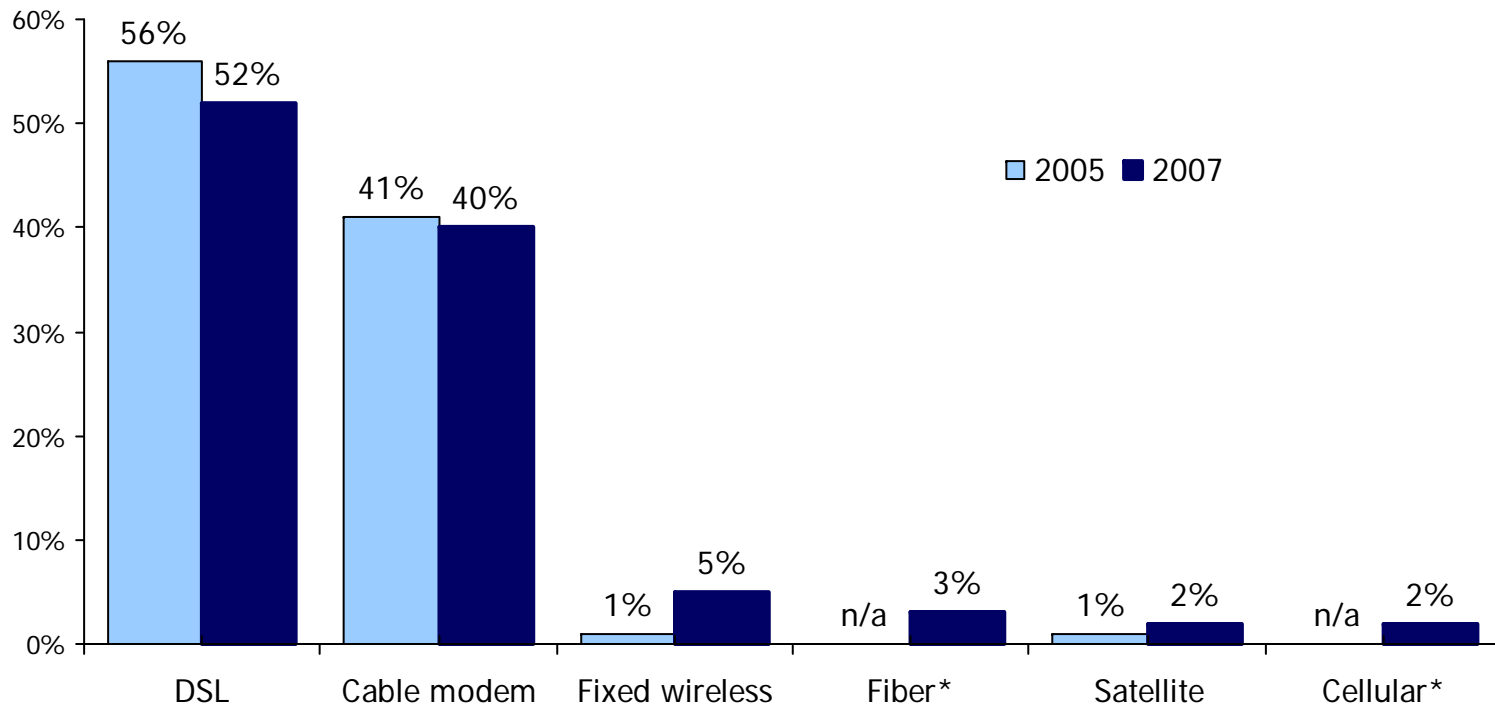
n=10,830 respondents in 2007



Type of Broadband Adoption

- DSL and cable modem services are the leading forms of broadband used in the state.
- However over time, their use is trending down as alternative broadband options such as fixed wireless and satellite are growing in popularity.

Trend in Residential Broadband Adoption



n=3,776 respondents using broadband at home in 2007

* Not captured in 2005



Online Job Searches

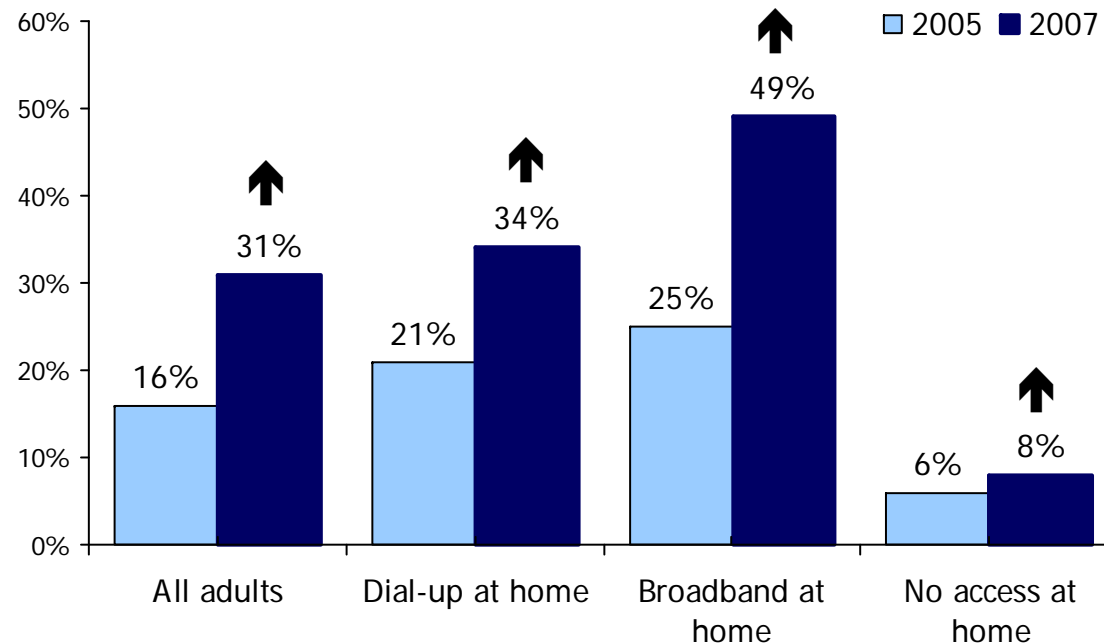




Online Job Searches by Form of Access at Home

- Since 2005, the share of residents who use the Internet to obtain information about jobs and employment has nearly doubled to 31% of all adults in the state.
- Significant increases have been observed regardless of the type of Internet access in the home, although the largest absolute gains are found among those with broadband.

Get Information for Jobs and Employment Online



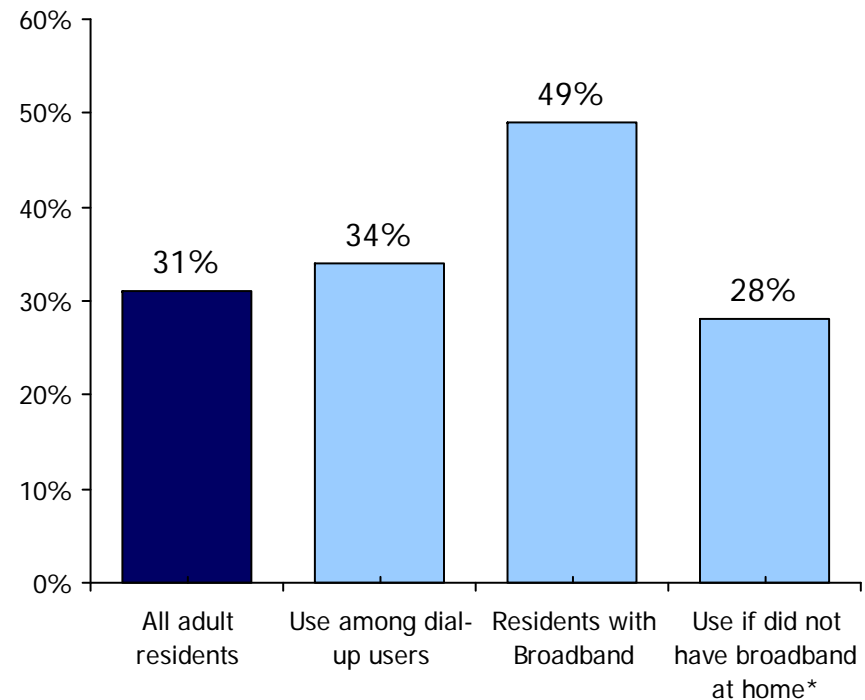
↑ indicates statistically significant difference between 2005 and 2007 (at 95% confidence)



Online Job Searches: Broadband Enablement

- Nearly one-third (31%) of all adult residents access the Internet for job searching. This proportion increases to 49% among residents with broadband service at home.
- Without broadband service, the share of broadband enabled residents who use the Internet for job searching would be less (28%) than to that of today's dial-up users (34%).
- Clearly, having a broadband connection at home better enables residents to search for employment.

Percent of KY Adult Residents Using Internet for Job Searching, 2007



n=2,701 respondents with dial-up access and 3,776 respondents with broadband access at home.

* Defined as actual usage minus the share of users who say the application would "not be worthwhile" without their broadband service.

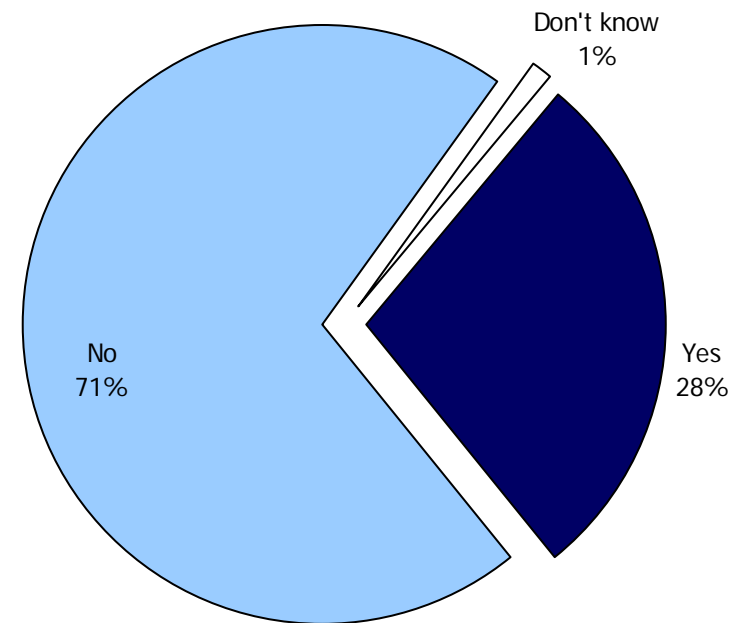
"Not worthwhile" share of application's users data collected from statewide control sample.



Online Job Searches: Jobs Found and Filled

- Of the one million Kentucky residents who report searching for employment online, 28% indicate that they have acquired a new job from their efforts.
- This translates to approximately 280,000 jobs. Of these, two-thirds were filled by residents with broadband service.

Did your online job search contribute to your finding a job?



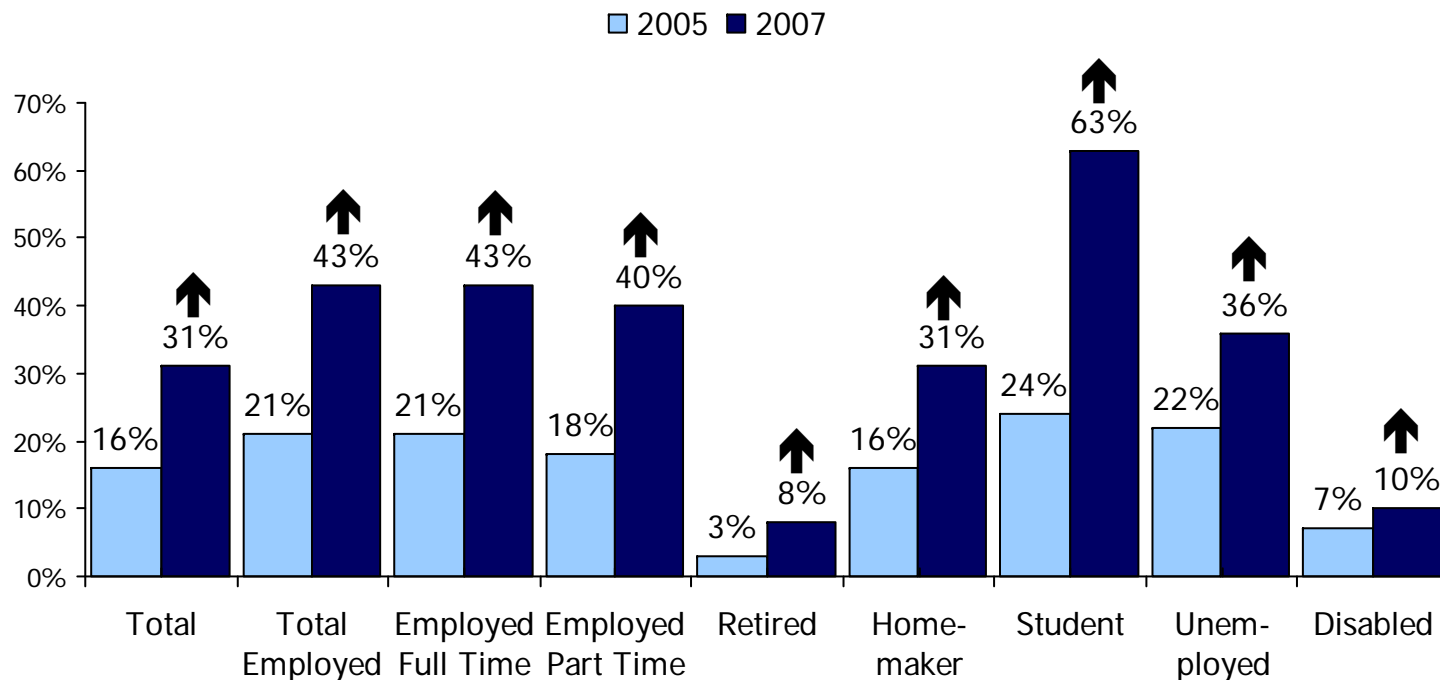
n=175 adults from the statewide control sample who conduct online job searches



Online Job Searches by Employment Status

- Since 2005, increasing shares of residents in all employment categories conduct online job searches online.
- Of particular note, 36% of residents who are unemployed report that they search for jobs or employment online, up from 22% in 2005.

Percent of KY Adult Residents Using the Internet for Job Searching



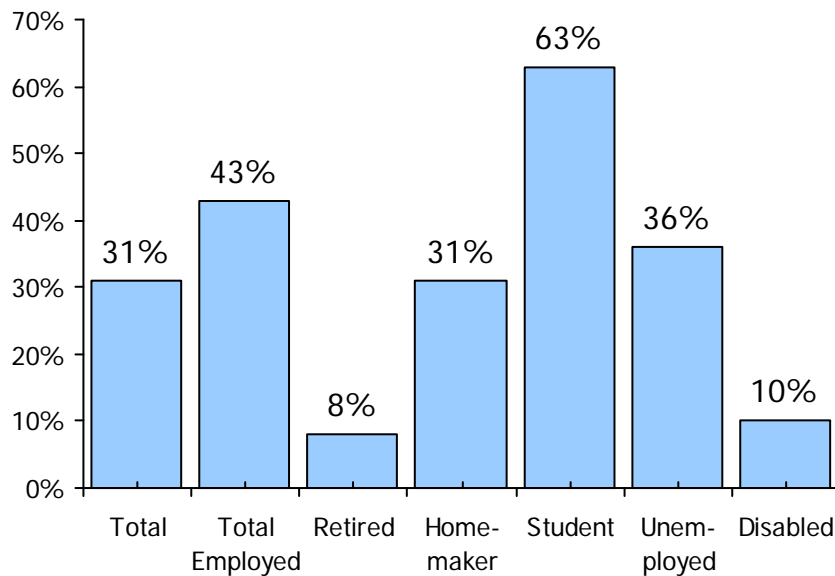
↑ indicates statistically significant difference between 2005 and 2007 (at 95% confidence)



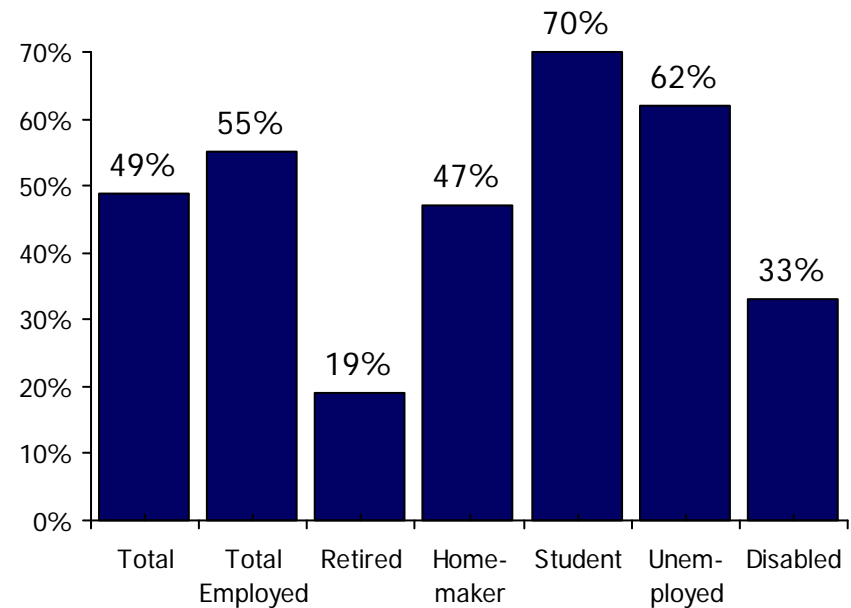
Online Job Searches by Employment Status

- Just over one-third of unemployed residents are searching for jobs online, and only one in ten disabled residents are doing so.
- With broadband at home, the majority of unemployed residents and one third of disabled residents use the Internet for job searching.

Percent of KY Adult Residents Using Internet for Job Searching



Use of Internet for Job Searching Among Broadband Enabled Residents

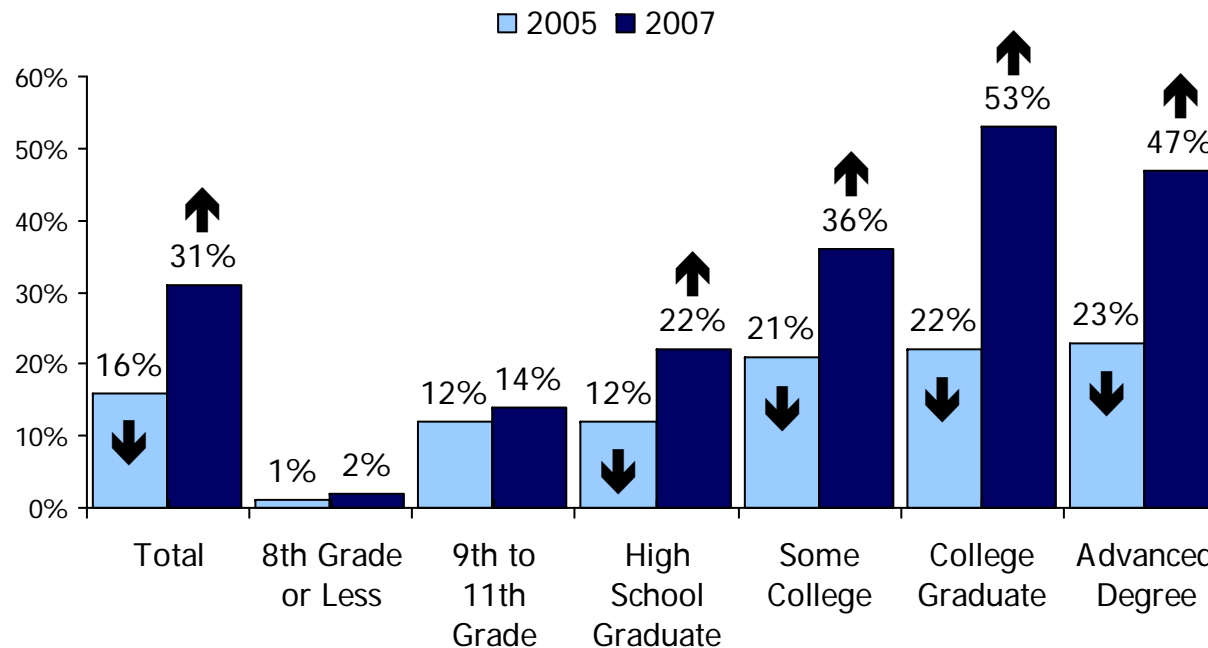




Online Job Searches by Educational Attainment

- The use of the Internet for seeking information about jobs and employment has grown much faster among college graduates, with little change found among the least educated residents of Kentucky.

Percent of KY Adult Residents Using the Internet for Job Searching



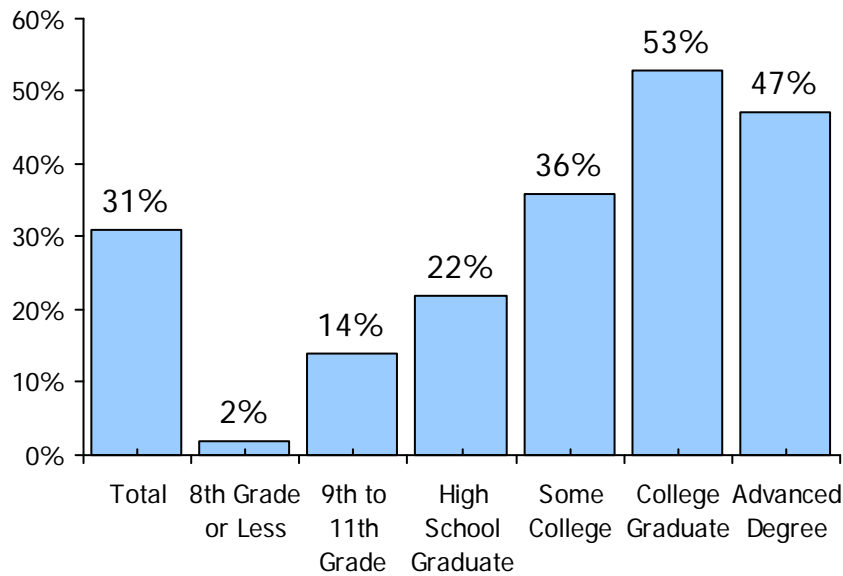
↑↓ indicates statistically significant difference between 2005 and 2007 (at 95% confidence)



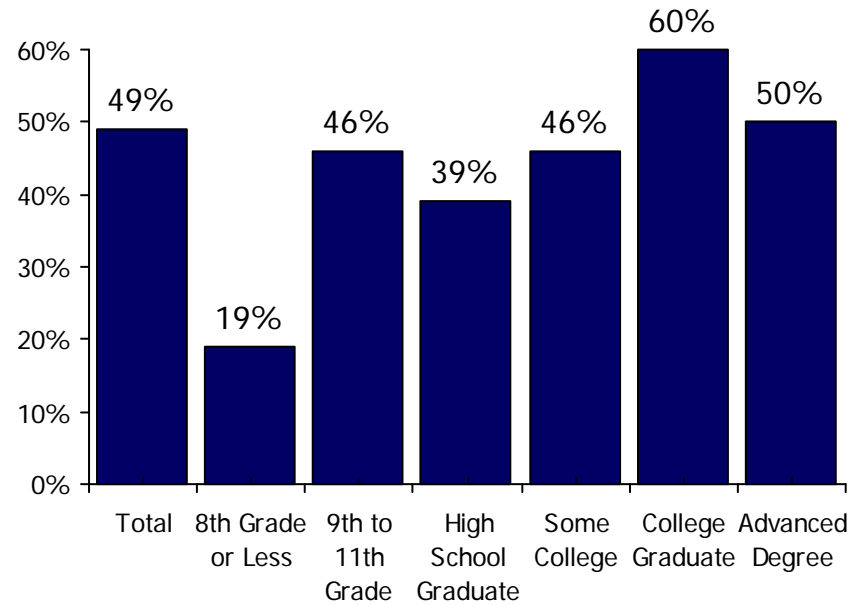
Online Job Searches by Educational Attainment

- Residents with at least some college education are the most likely to search for information about jobs online.
- With broadband at home, at least two out of five residents with more than an eighth grade education conduct online job searching activities.

Percent of KY Adult Residents Using Internet for Job Searching



Use of Internet for Job Searching Among Broadband Enabled Residents

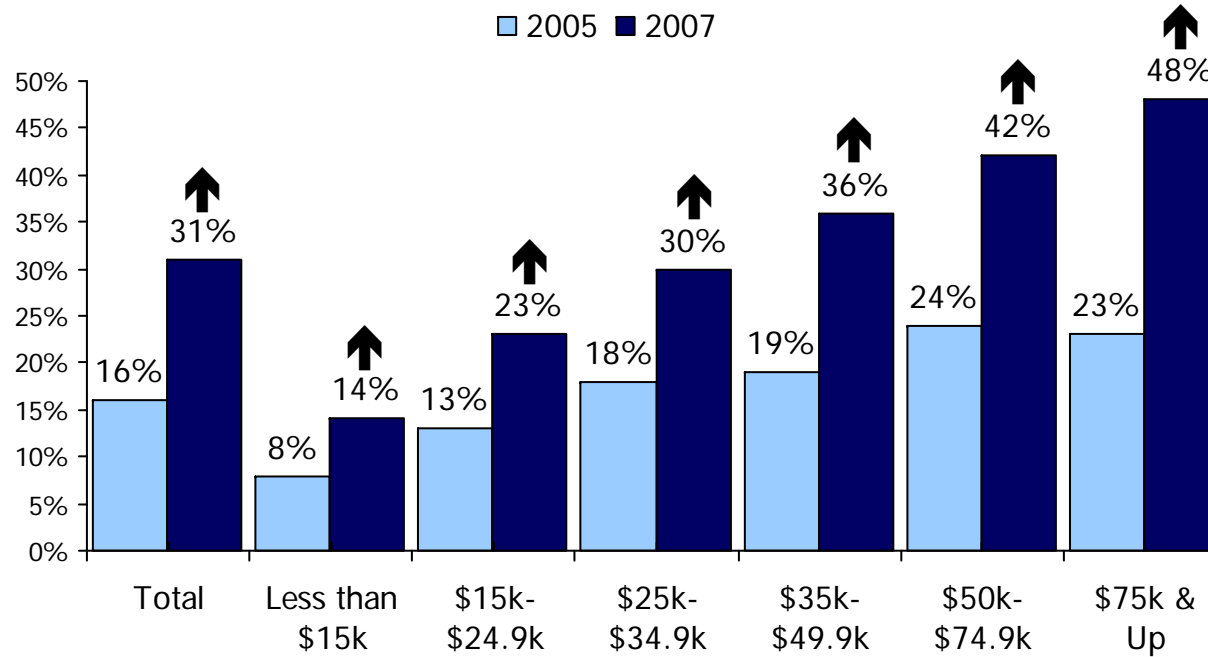




Online Job Searches by Household Income

- Increased use of the Internet for online job searching is evident among all income groups.
- However, the increase is greater among the higher income brackets.

Percent of KY Adult Residents Using the Internet for Job Searching



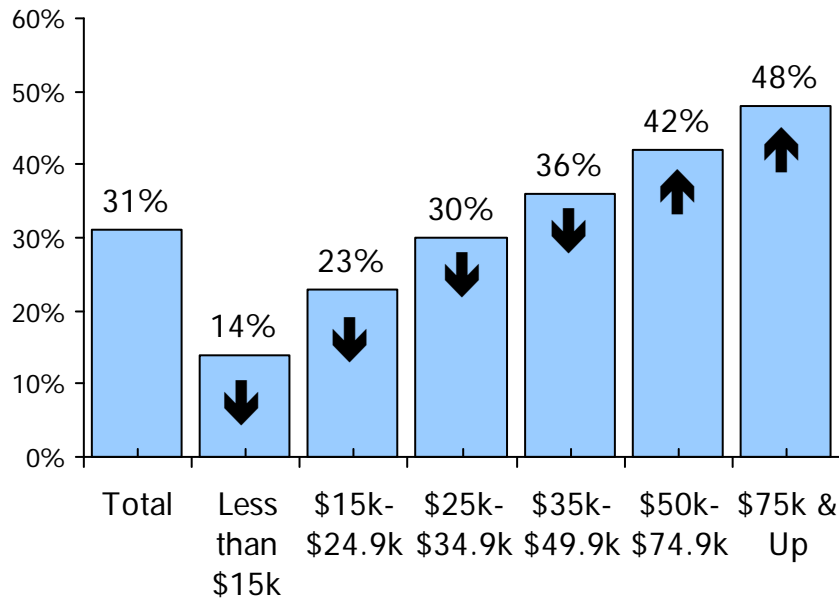
↑ indicates statistically significant difference between 2005 and 2007 (at 95% confidence)



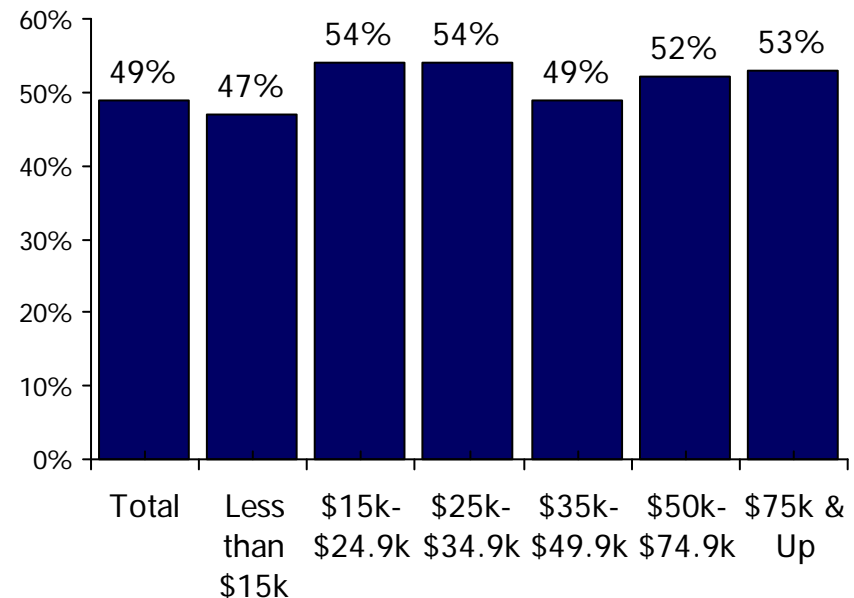
Online Job Searches by Household Income

- In general, online job searching rises directly with increasing household income.
- However with broadband at home, about half of KY adult residents in all income categories search for jobs online, without any significant differences between income brackets.

Percent of KY Adult Residents Using Internet for Job Searching



Use of Internet for Job Searching Among Broadband Enabled Residents



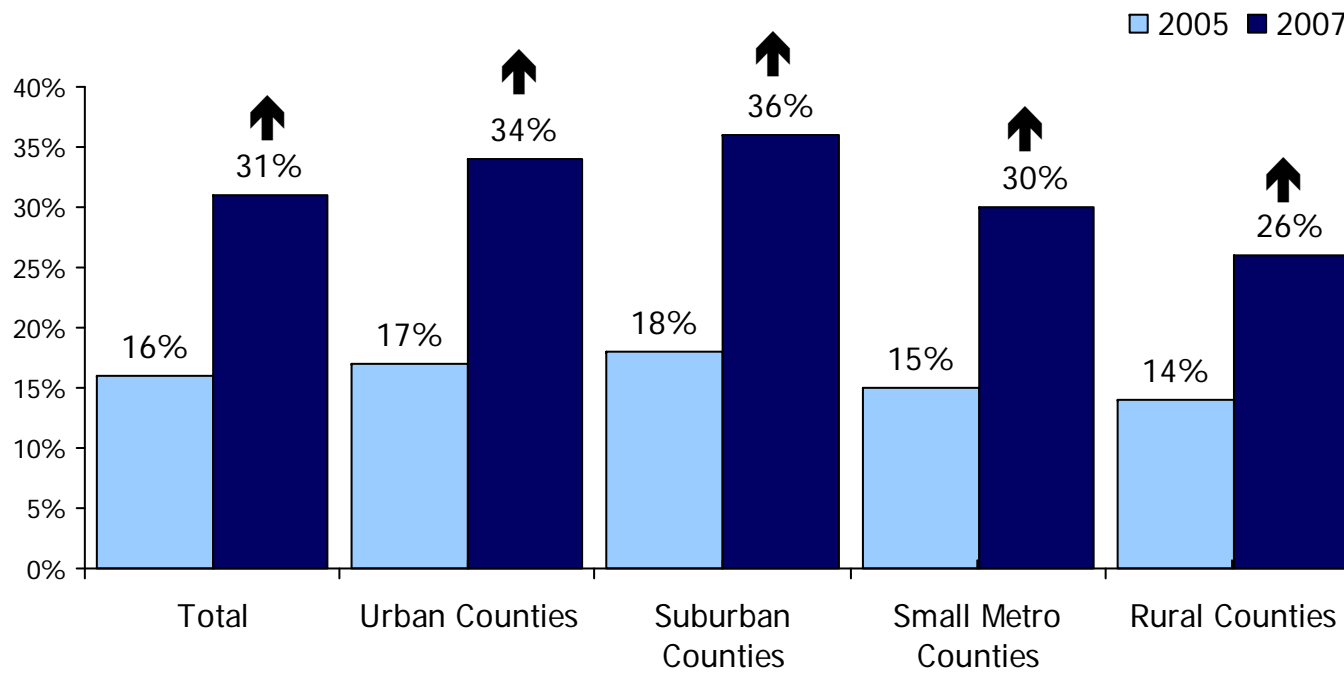
↑↓ indicates statistically significant differences between groups (at 95% confidence)



Online Job Searches by Urban-Rural Geography

- While increases in using the Internet for job searching have been seen in both urban and rural areas, the absolute size of this increase is highest in urban and suburban counties.

Percent of KY Adult Residents Using the Internet for Job Searching



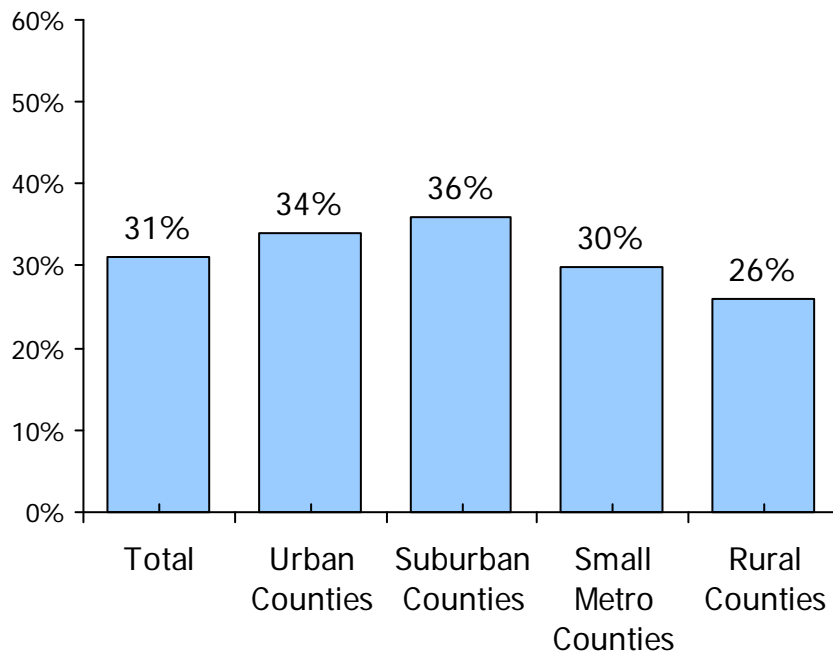
↑ indicates statistically significant difference between 2005 and 2007 (at 95% confidence)



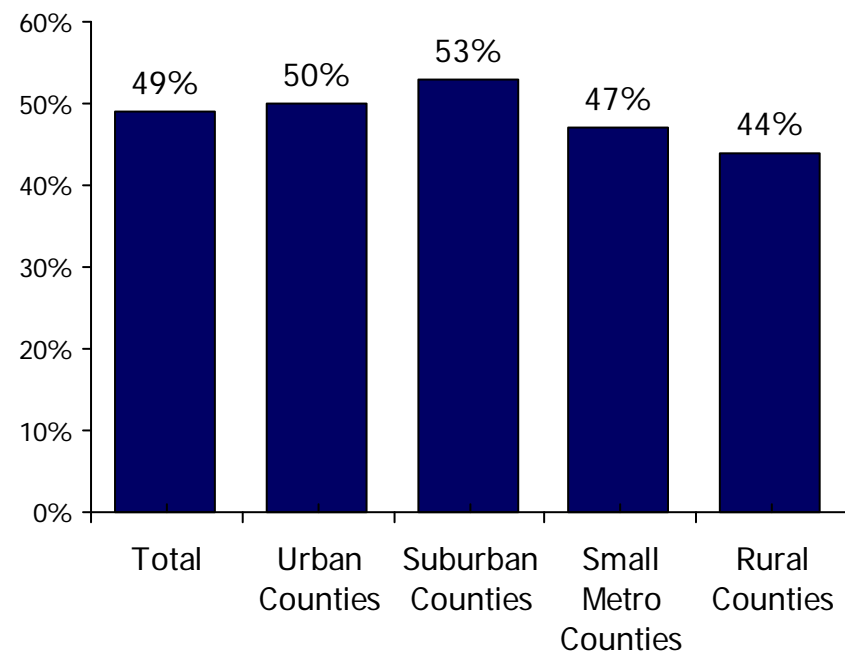
Online Job Searches by Urban-Rural Geography

- Residents of suburban areas are the most likely to use the Internet to gather information about jobs and employment.
- With broadband at home, the share of rural residents who look for jobs or employment information online increases to 44%.

Percent of KY Adult Residents Using the Internet for Job Searching



Use of Internet for Job Searching Among Broadband Enabled Residents





Telework Habits and Potential

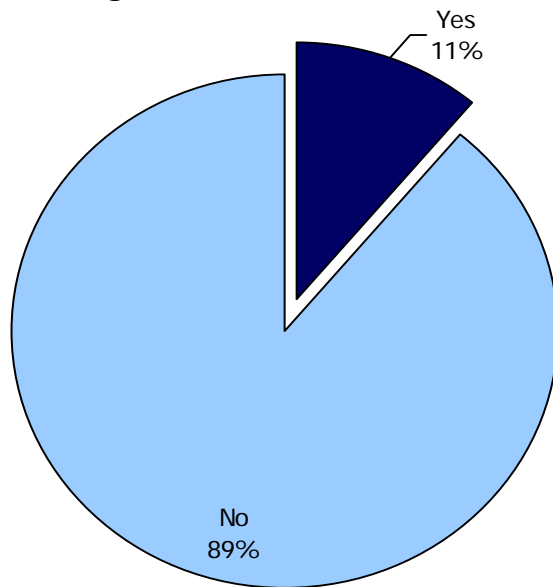




Teleworking Through a Broadband Connection

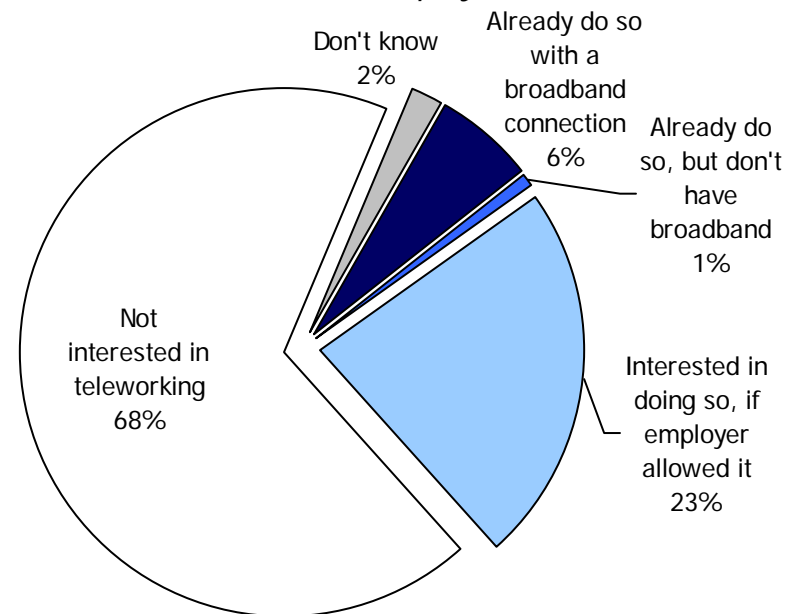
- Among employed residents with a broadband connection at home, 11% (or about 110,000 workers) report that they regularly work from home through their broadband connection. These individuals comprise 6% of all employed adults, but another 23% are interested in teleworking.

Do you regularly work from home through a broadband connection?



n=169 employed respondents from the statewide control sample who have broadband service at home

Interest in teleworking
(Percent of employed adults)

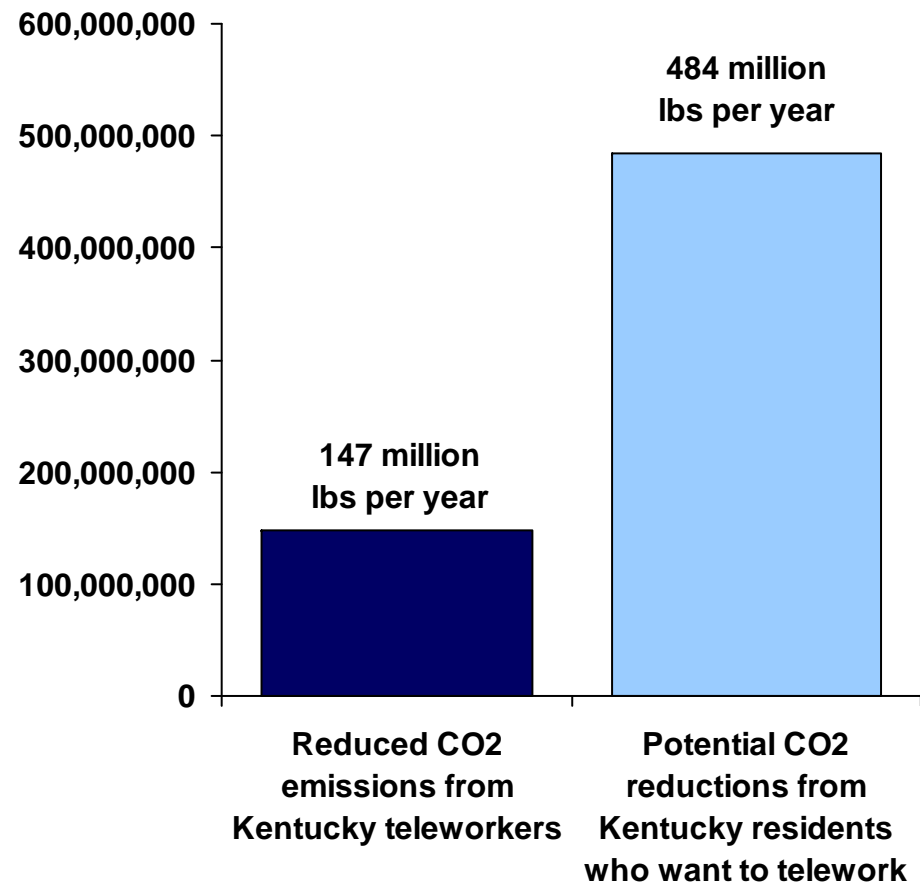


n=321 employed adults from the statewide control sample



The Positive Impact of Kentucky Teleworkers on the Environment

- According to the U.S. Bureau of Transportation Statistics, Americans commute an average of 34.3 miles round-trip for work.*
- Using figures from the World Resources Institute** and The Center for Environmental Economic Development,*** if Kentucky teleworkers work from home three days a week, that reduces carbon emissions by an average of 147 million lbs. each year.
- If every Kentucky worker interested in teleworking were allowed to do so three days a week, that would reduce CO₂ production in the state by over 484 million lbs. each year.



*October 2003 BTS Omnibus Survey

**<http://embarq.wri.org/documents/Schipper-VehicEfficiency.pdf>

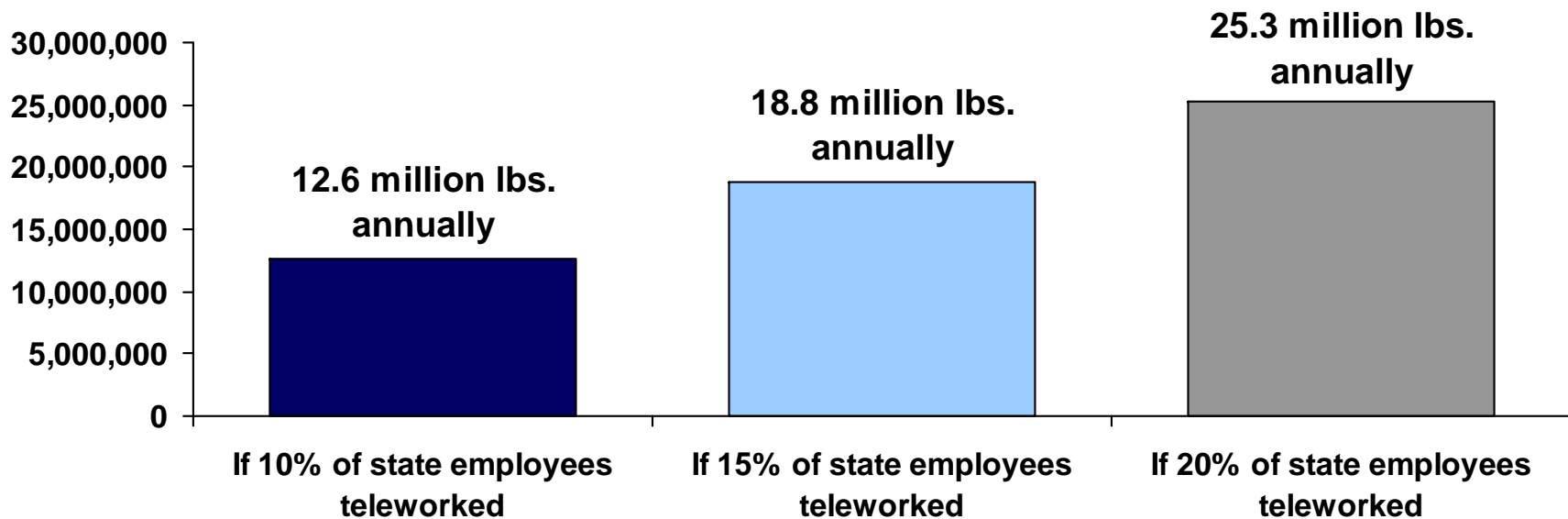
***<http://ceedweb.org/PDFs/CO2Worksheet.pdf>



The Potential Environmental Impact of a Kentucky State Telework Policy

- If the Commonwealth of Kentucky allowed one out of every ten state workers to telework three days a week, Kentucky could reduce its CO₂ emissions by approximately 12.6 million lbs. annually.

Annual CO₂ emissions saved if state employees telework three days a week:

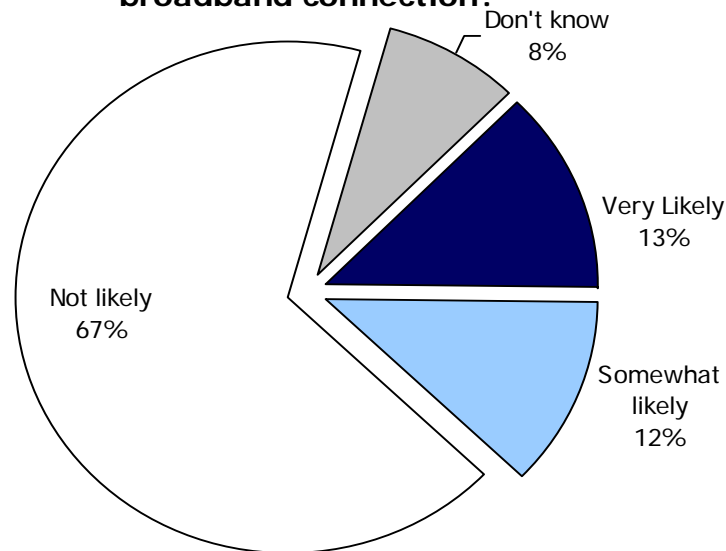




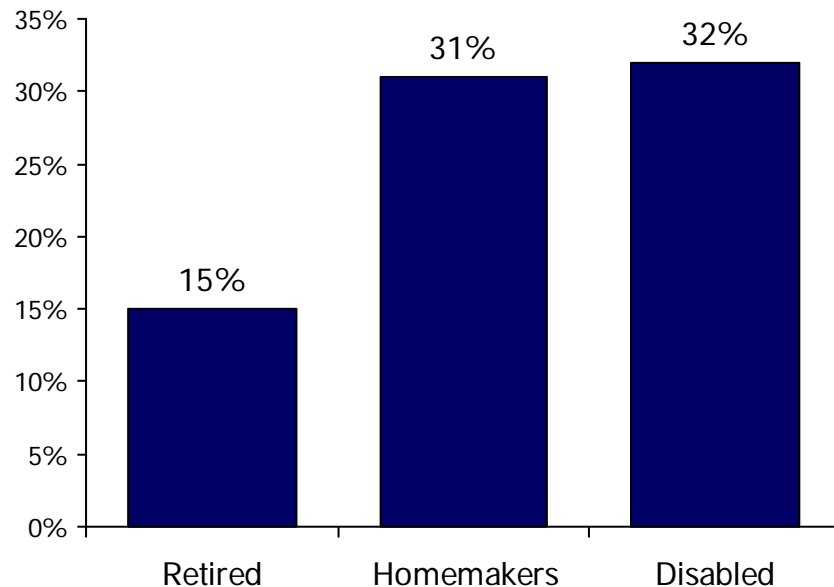
Teleworking to Join Labor Force

- Among adults who are not employed in the labor force today, one-quarter say they would be likely to work if they could work from home through a broadband connection. Homemakers and residents on disability are twice as likely as retirees to say they would be likely to work if they could do so from home through broadband.

How likely would you be to work if you could work from home with a broadband connection?



Very or Somewhat Likely to Work via Broadband Teleworking



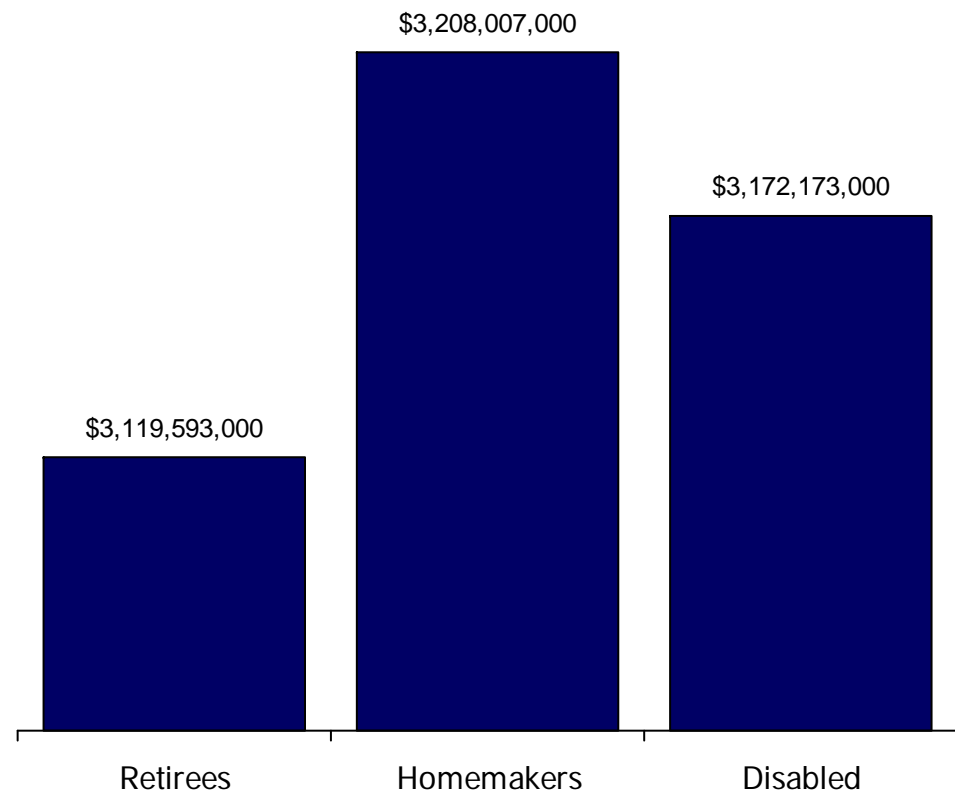
n=284 respondents from the statewide control sample who are not employed in the labor force



Direct Economic Benefits of Teleworking

- If every unemployed adult who expressed willingness to telework were allowed to do so (minus the state unemployment rate), over 337,000 Kentuckians would be given the chance to work.
- If each of those workers made the average income for Kentucky, that would result in a direct impact of over 11 billion dollars annually.
- That equals more than \$3.1 billion for retirees, \$3.2 billion for homemakers, and \$3.1 billion dollars earned by disabled persons annually.

Potential Annual Earnings from Teleworking



n=284 respondents from the statewide control sample who are not employed in the labor force



Working At Home Online

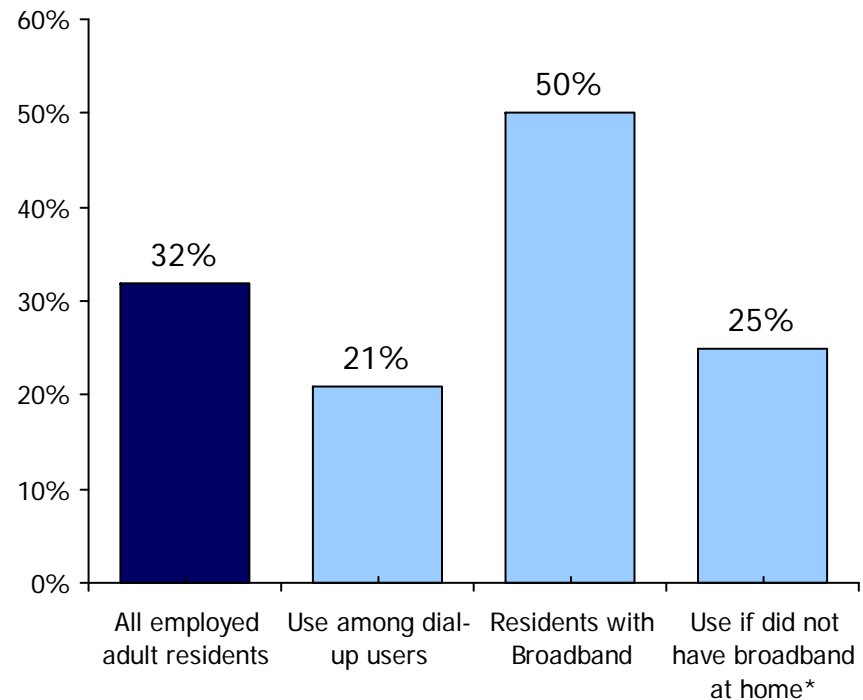




Working At Home Online

- Apart from a formalized telework arrangement whereby workers regularly work from home through their broadband connection, the survey also finds that nearly one-third of employed residents report using the Internet to do work from home.
- Half of employed residents with a broadband connection report using the Internet to do some work from home.
- Without their broadband connection, half of these residents report that working from home would not be worthwhile without their broadband connection.

Percent of Employed Adult Residents Using the Internet to do Work at Home, 2007



n=1,614 employed respondents with dial-up access and 2,657 employed respondents with broadband access at home.

* Defined as actual usage minus the share of users who say the application would “not be worthwhile” without their broadband service.

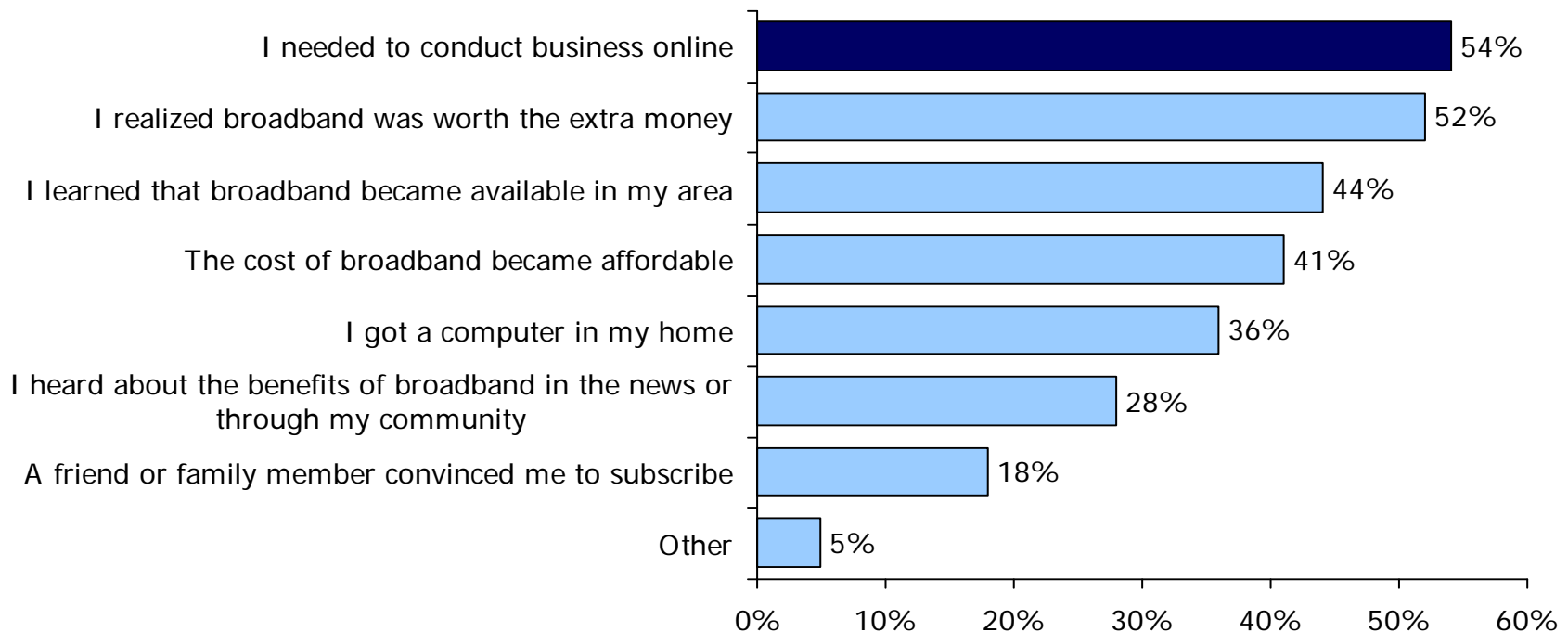
“Not worthwhile” share of application’s users data collected from statewide control sample (n=169).



Incentives to Adopt Broadband

- For residents who work from home online with a broadband connection, the “need to conduct business online” was the leading reason for subscribing to broadband, along with a realization that the benefits were worth the extra cost.

Which of the following contributed to your decision to subscribe to broadband?



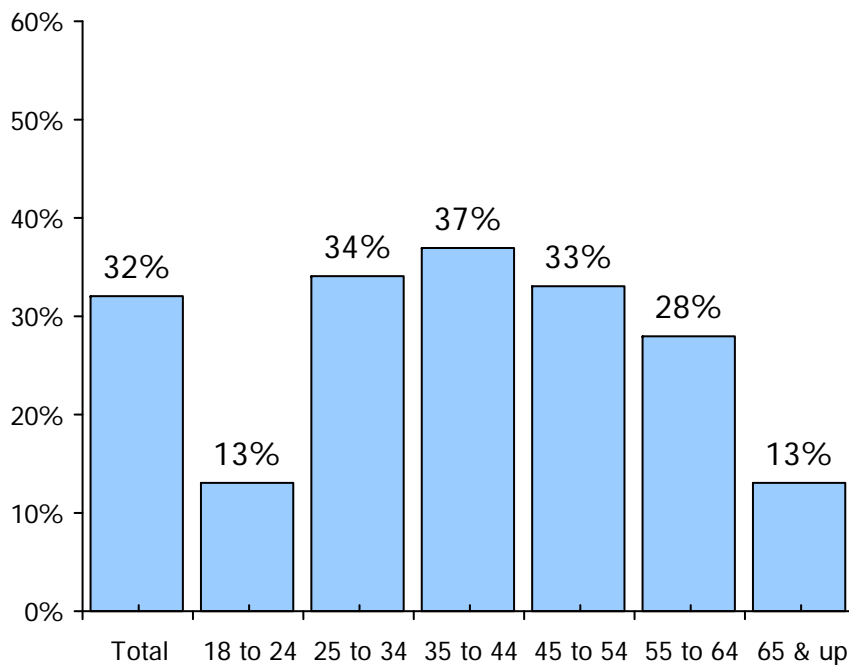
n=1,184 respondents with broadband access at home who use the Internet to work at home



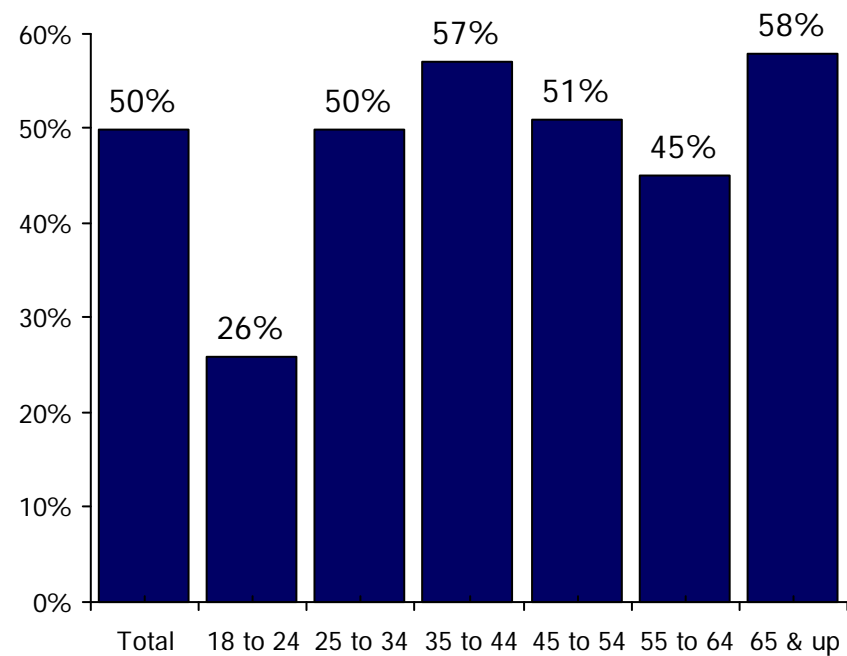
Working At Home Online by Age

- Working at home online is much less common among the youngest and the oldest members of the labor force.
- However, with a broadband connection, senior citizens who work are just as likely, if not more so, to do work at home.

**Percent of Employed Adult Residents
Working At Home Online**



**Percent of Broadband Enabled Residents
Working At Home Online**

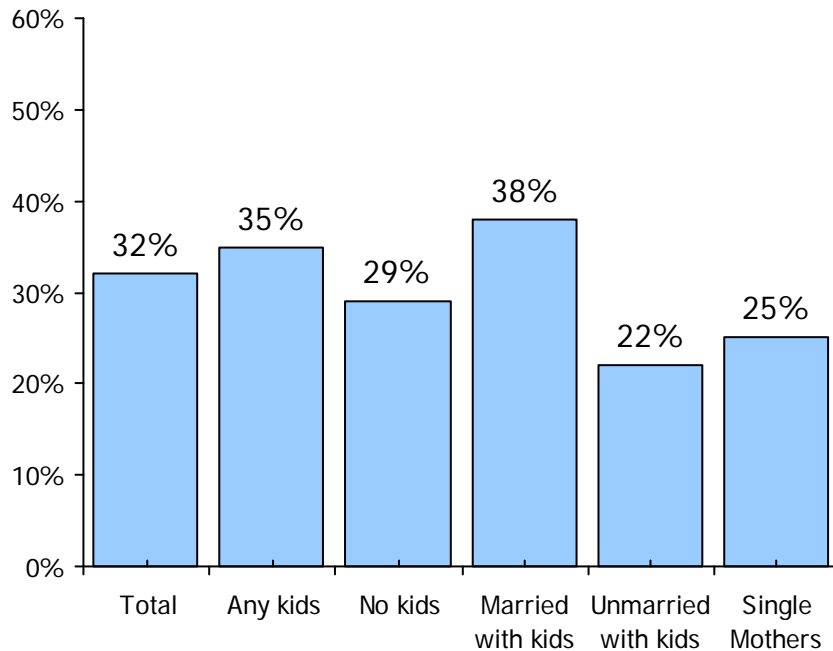




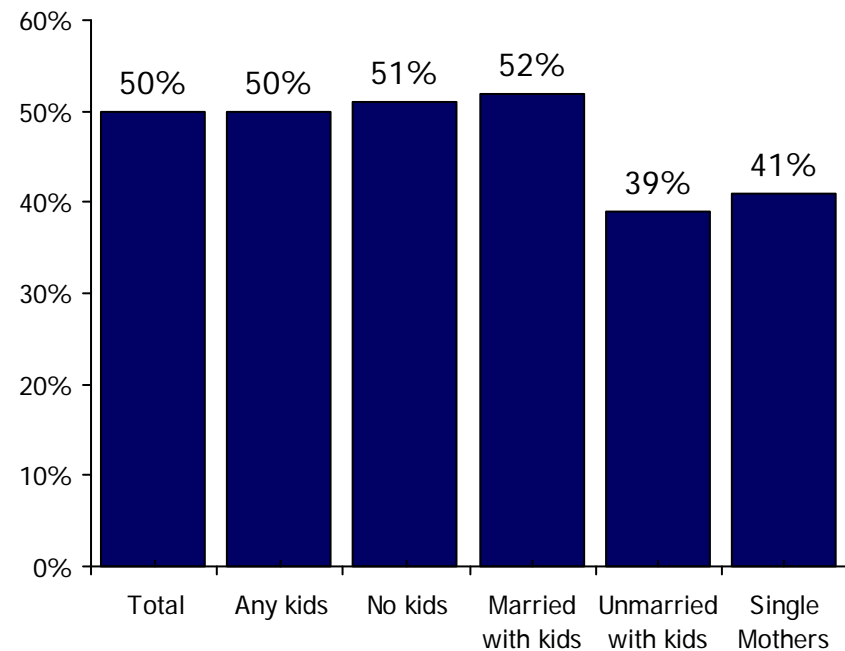
Working At Home Online by Presence of Children

- Generally residents with children at home are more likely to work at home through the Internet than residents without children. However, married adults with kids are more likely than single mothers or other unmarried working parents to work at home this way. This disparity dissipates somewhat with broadband service at home.

**Percent of Employed Adult Residents
Working At Home Online**



**Percent of Broadband Enabled Residents
Working At Home Online**

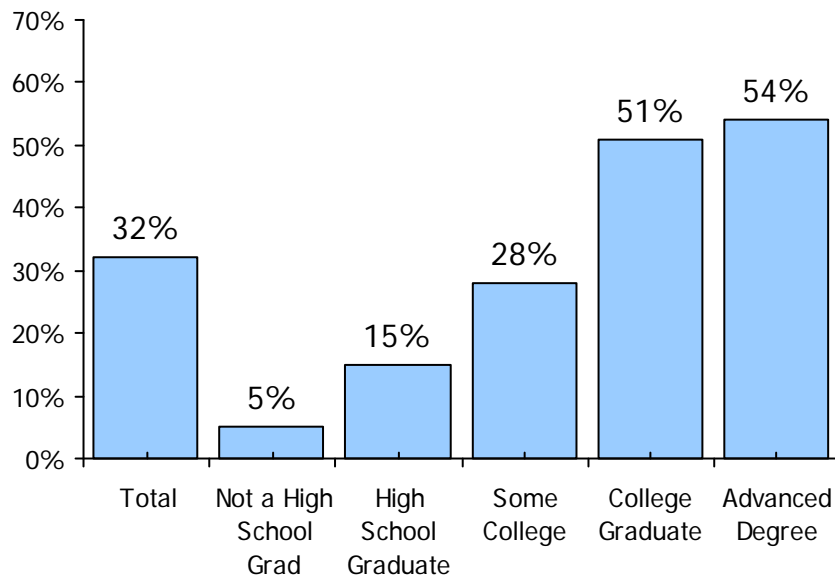




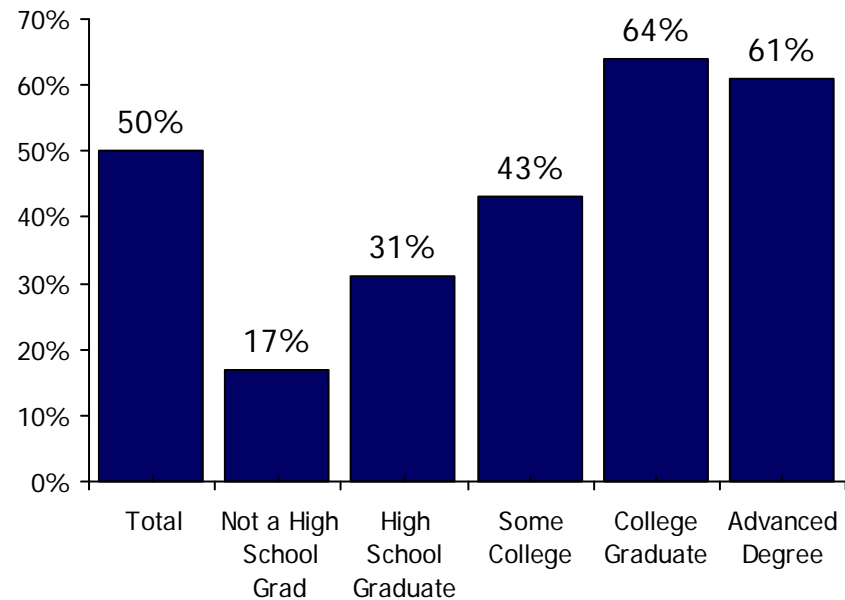
Working At Home Online by Educational Attainment

- A majority of all college graduates who work report doing some work at home on the Internet. Residents without a college degree are significantly less likely to work at home online. With broadband at home, the same disparity is present.

**Percent of Employed Adult Residents
Working At Home Online**



**Percent of Broadband Enabled Residents
Working At Home Online**

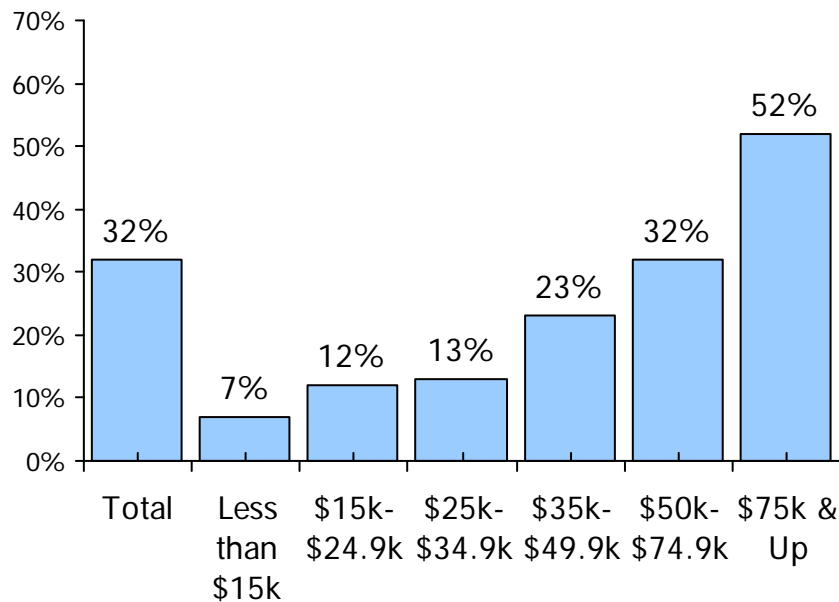




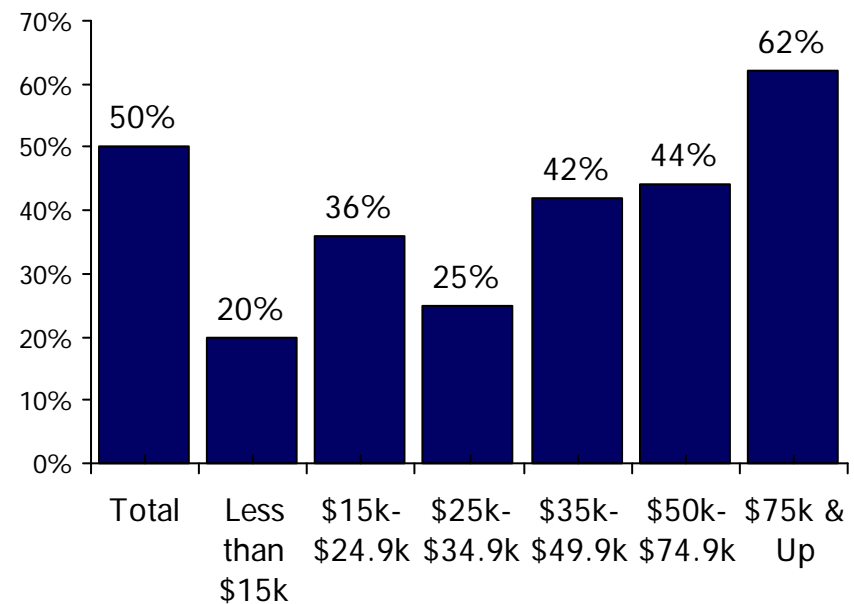
Working At Home Online by Household Income

- Working from home through the Internet is significantly more likely among residents with household income of \$75,000 or more.
- Even with broadband connections, working from home is most strongly associated with the highest income bracket.

**Percent of Employed Adult Residents
Working At Home Online**



**Percent of Broadband Enabled Residents
Working At Home Online**

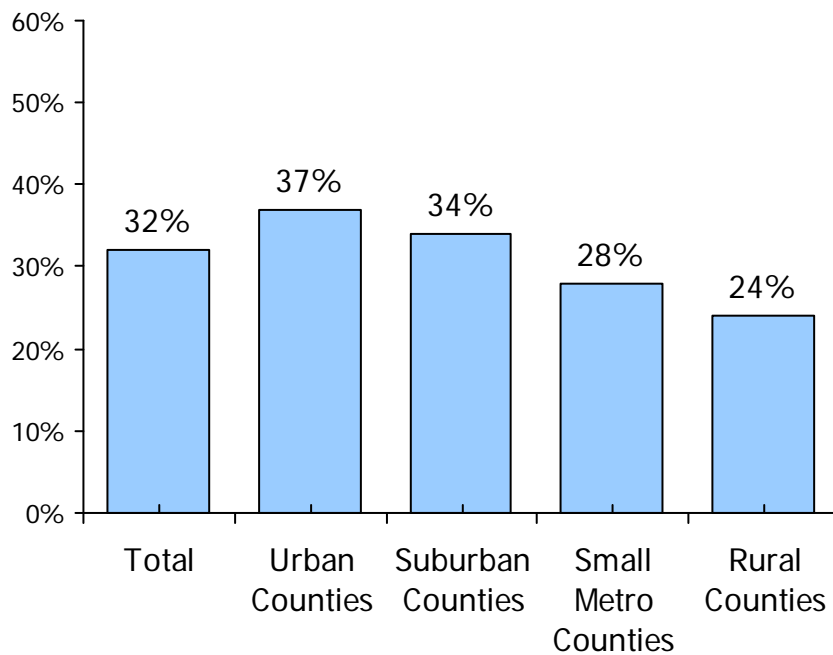




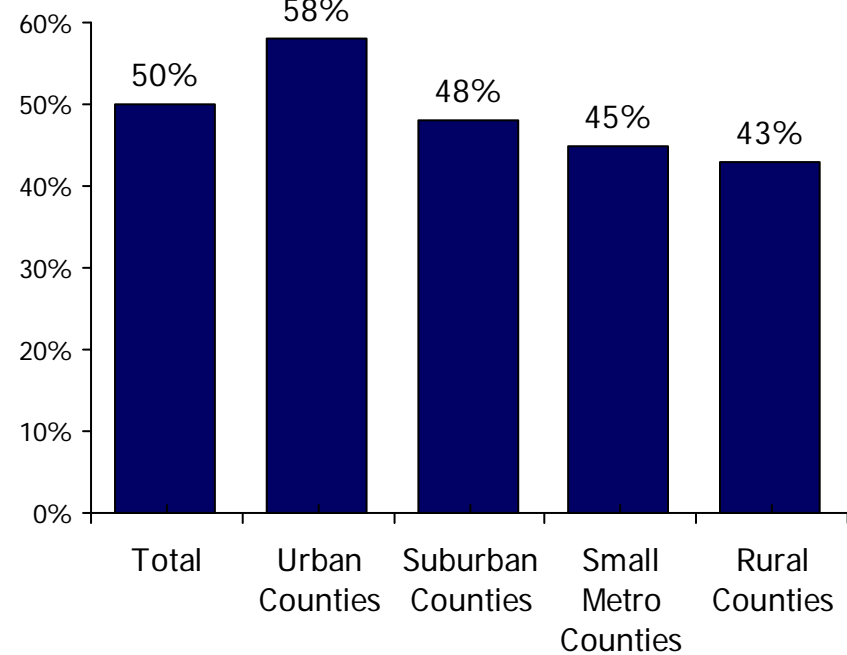
Working At Home Online by Urban-Rural Geography

- Residents of urban and suburban counties are more likely than those in small town or rural areas to work at home online.
- With broadband at home, this activity is most strongly associated with urban locations.

**Percent of Employed Adult Residents
Working At Home Online**



**Percent of Broadband Enabled Residents
Working At Home Online**

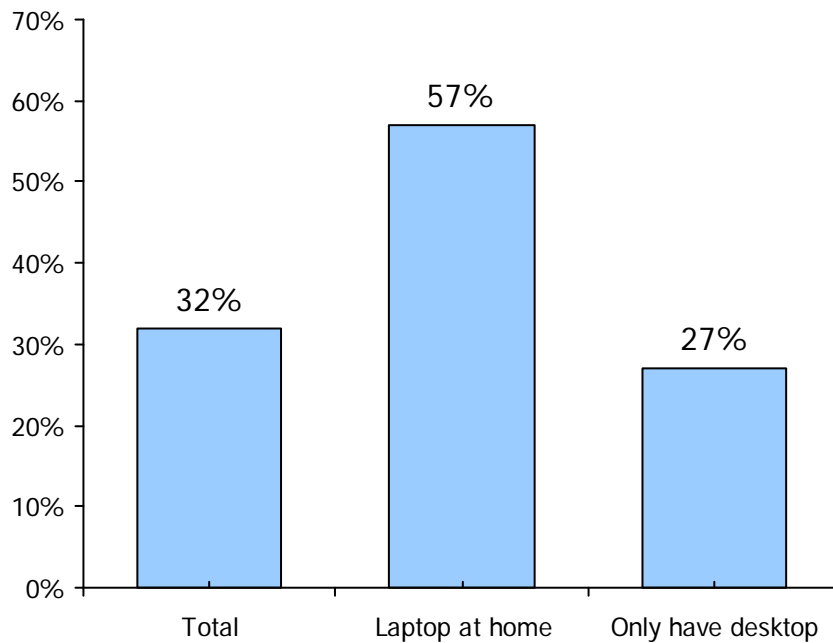




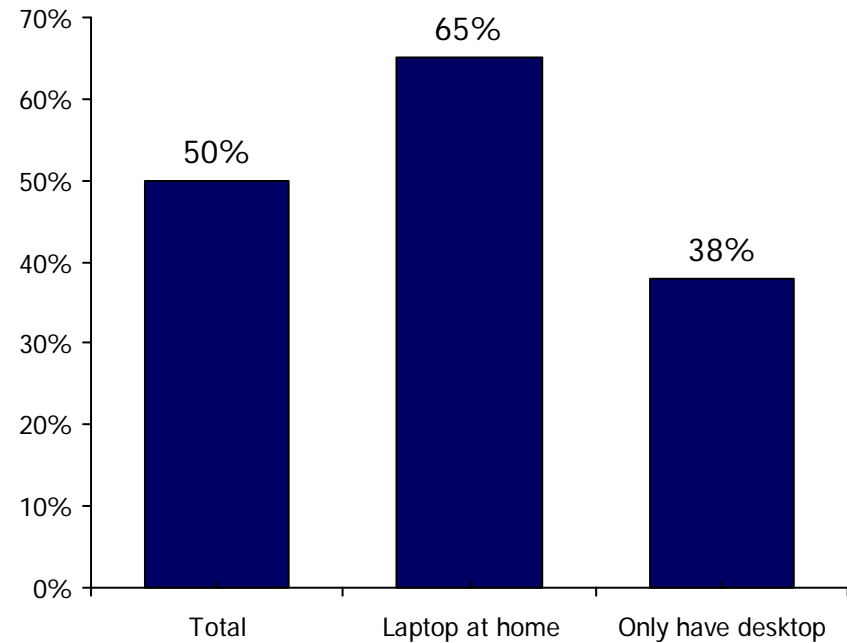
Working At Home Online by Type of Computer

- Use of a laptop computer is strongly correlated with working from home through the Internet, with or without broadband service.

**Percent of Employed Adult Residents
Working At Home Online**



**Percent of Broadband Enabled Residents
Working At Home Online**





Methodology and Sample Demographics





Methodology

- Data were collected by telephone, through live computer assisted interviews from a statewide random digit dial (RDD) sample 10,830 households contacted between August 10 and September 22, 2007.
 - This research was designed to measure consumer technology indicators at the county level for all 120 counties in the state. Approximately 85 interviews were completed in each county, with a total of 10,225 interviews completed in this fashion.
 - An additional demographically representative statewide sample of 605 adult residents was completed to gather some additional details at the statewide level.
- The questionnaire screened to include only adults age 18 or older, with quotas set by gender and age to ensure adequate representation of all adults in each county sample as well as the statewide control sample.
- Weights were applied to each county's survey sample to match the most recent population Census estimates by age and gender.
 - Additional weights are applied to the combined statewide sample of 10,830 to account for the relative size of each county to use for statewide benchmarking purposes.
- Sampling error:
 - Total survey sample (n=10,830): $\pm 1.7\%$ at the 95% level of confidence.
 - Each county (n= ~ 85): $\pm 10.7\%$ at the 95% level of confidence.
 - Statewide control sample (n=605): $\pm 4.1\%$ at the 95% level of confidence.

** Sample error accounts for weighting, using the "effective sample size."*



Total Survey Sample (n=10,830)

Gender:		Employment Status:	
Male	48%	Employed full or part time	57%
Female	52%	Retired	20%
Age:		Homemaker not employed outside home	7%
18 to 24	7%	Student not working for wages	1%
25 to 34	23%	Unemployed, disability, other	12%
35 to 44	17%	No answer/refused	3%
45 to 54	22%	Educational Attainment:	
55 to 64	14%	Did not graduate high school	13%
65 or older	17%	High school graduate	31%
Mean age (years)	47.0	Some college	25%
Median age (years)	46.0	College graduate or higher	28%
Region of the State:		No answer /refused	3%
North Central	47%	Household Income:	
Eastern KY	33%	Under \$25,000	22%
South Central KY	11%	\$25,000 to \$49,999	25%
Western KY	9%	\$50,000 to \$74,999	15%
Marital Status:		\$75,000 or higher	21%
Single, never married	10%	No answer/ refused	17%
Married or living in partnership	66%	Race:	
Separated or divorced	13%	White	88%
Widowed	9%	Black	5%
Refused to say	2%	Any other	2%
Any children under age 18 in household	39%	Refused	5%
Average household size (# of persons)	2.8	Of Hispanic origin or descent	2%



Statewide Control Sample (n=605)

Gender:		Employment Status:	
Male	48%	Employed full or part time	53%
Female	52%	Retired	19%
Age:		Homemaker not employed outside home	10%
18 to 24	10%	Student not working for wages	2%
25 to 34	21%	Unemployed, disability, other	14%
35 to 44	18%	No answer/refused	2%
45 to 54	21%	Educational Attainment:	
55 to 64	14%	Did not graduate high school	15%
65 or older	16%	High school graduate	31%
Mean age (years)	46.2	Some college	26%
Median age (years)	45.3	College graduate or higher	25%
Region of the State:		No answer /refused	2%
North Central	47%	Household Income:	
Eastern KY	33%	Under \$25,000	23%
South Central KY	11%	\$25,000 to \$49,999	26%
Western KY	9%	\$50,000 to \$74,999	15%
Marital Status:		\$75,000 or higher	18%
Single, never married	15%	No answer/ refused	18%
Married or living in partnership	62%	Race:	
Separated or divorced	13%	White	88%
Widowed	8%	Black	4%
Refused to say	2%	Any other	4%
Any children under age 18 in household	38%	Refused	4%
Average household size (# of persons)	2.9	Of Hispanic origin or descent	3%



Attribution

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