

ANNUAL UPDATE

FULL TIME EMPLOYMENT ESTIMATES

Nielsen Audio will update estimates of adults (18+) employed full time for the October 2017 PPM Survey using an average of 12 monthly estimates from the Bureau of Labor Statistics' Current Population Survey (CPS). The CPS data is a monthly survey and the source of the monthly unemployment statistics reported by the news media. These estimates are used in weighting the In-Tab sample in PPM markets only. The next update is scheduled for the October 2018 survey.

We continue to anticipate that future changes in employment estimates will be gradual. The employment estimates difference reflected in the October 2017 refresh are nominal as the average difference across all markets is approximately +0.5 of a percentage point compared to the most recent refresh that occurred in October 2016. Further, the differences in local markets range from a 5.9 percentage point increase to a 2.3 percentage point decrease. Overall, employment estimates in 28 Metros increased whereas 20 metros were similar or experienced a decrease.

Markets where the Persons 18+ Employed Full Time population estimates increase may see that group have more of an impact on the Total Persons Ratings than seen previously as that group will begin to be weighted to a larger population. Likewise, markets where the Persons 18+ Employed Full Time population estimates decrease may see that group have less of an impact on the Total Persons Ratings as that group will begin to be weighted to a smaller population. Persons Employed Full-time tend to listen to more radio and contribute higher

Time Spent Listening (TSL) than those who are not employed. Therefore markets with an increase in the Persons 18+ Employed Full Time population estimate may see those higher TSL individuals begin to be weighted higher than they previously had been.

The final impact of full time employment changes on ratings is not possible to reliably predict since other factors may also impact listening levels. Other factors to consider when analyzing audience estimate changes include:

- Programming changes in the market.
- Events such as weather or major news stories which can influence radio listening behavior.
- Typical survey to survey variance in estimates that is characteristic of survey samples.
- Panel changes that may occur from month-to-month
- Other changes and improvements in the PPM service.

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Persons 18+ Employed Full Time

Source: Claritas, LLC (Average monthly CPS data)
 October 2017 Refresh includes June 2016 - May 2017 monthly CPS
 October 2016 Refresh includes June 2015 - May 2016 monthly CPS

Metro	October 2016 Estimate	October 2017 Estimate	Difference
Atlanta	54.7%	57.1%	2.4%
Austin	59.3%	61.8%	2.5%
Baltimore	54.9%	55.0%	0.1%
Boston	48.7%	54.2%	5.5%
Charlotte-Gastonia-Rock Hill	54.7%	54.1%	-0.6%
Chicago	52.4%	51.7%	-0.7%
Cincinnati	50.7%	52.3%	1.6%
Cleveland	48.2%	47.2%	-1.0%
Columbus, OH	55.3%	54.7%	-0.6%
Dallas-Ft. Worth	57.6%	58.8%	1.2%
Denver-Boulder	56.5%	57.0%	0.5%
Detroit	46.3%	48.2%	1.9%
Greensboro-Winston-Salem-High Point	50.1%	52.7%	2.6%
Hartford-New Britain-Middletown	54.2%	51.9%	-2.3%
Houston-Galveston	54.8%	53.6%	-1.2%
Indianapolis	54.8%	56.8%	2.0%
Jacksonville	51.7%	50.5%	-1.2%
Kansas City	58.5%	57.1%	-1.4%
Las Vegas	50.4%	49.1%	-1.3%
Los Angeles	51.1%	50.9%	-0.2%
Memphis	50.4%	49.6%	-0.8%
Miami-Ft. Lauderdale-Hollywood	52.9%	53.1%	0.2%
Middlesex-Somerset-Union	54.8%	54.9%	0.1%
Milwaukee-Racine	53.1%	54.3%	1.2%

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Metro	October 2016 Estimate	October 2017 Estimate	Difference
Minneapolis-St. Paul	58.1%	56.2%	-1.9%
Nashville	56.4%	58.2%	1.8%
Nassau-Suffolk (Long Island)	51.9%	53.3%	1.4%
New York	52.1%	52.2%	0.1%
Norfolk-Virginia Beach-Newport News	51.0%	53.7%	2.7%
Orlando	54.5%	53.1%	-1.4%
Philadelphia	50.8%	50.8%	0.0%
Phoenix	52.8%	51.4%	-1.4%
Pittsburgh, PA	48.5%	47.6%	-0.9%
Portland, OR	52.1%	53.8%	1.7%
Providence-Warwick-Pawtucket	52.0%	51.2%	-0.8%
Raleigh-Durham	57.8%	59.5%	1.7%
Riverside-San Bernardino	46.5%	47.1%	0.6%
Sacramento	46.6%	44.5%	-2.1%
Salt Lake City-Ogden-Provo	54.3%	55.1%	0.8%
San Antonio	52.4%	51.5%	-0.9%
San Diego	49.4%	51.2%	1.8%
San Francisco	53.0%	53.4%	0.4%
San Jose	54.0%	55.9%	1.9%
Seattle-Tacoma	53.4%	54.3%	0.9%
St. Louis	53.9%	53.4%	-0.5%
Tampa-St. Petersburg-Clearwater	48.8%	51.8%	3.0%
Washington, DC	59.7%	60.7%	1.0%
West Palm Beach-Boca Raton	47.5%	53.4%	5.9%

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