

Economic Recession: Effects on Telephone Survey Staffing and Productivity

The National Bureau of Economic Research defines a recession as follows: it begins when the economy reaches a peak of activity and ends when the economy descends to its trough. It is accompanied by a significant decline in activity spread across the economy and lasts more than a few months, and is evident in production, employment, real income, and other indicators. This paper explores how hiring and retaining skilled telephone interviewers may affect survey organizations that conduct data collection.

A confluence of dramatic economic events in recent years has led to the largest reserve of qualified workers in the United States in decades. Most noticeably, when international money markets nearly collapsed in fall 2008, U.S. households and businesses lost access to credit. Diminished consumer power contributed to job losses and work hours declined in the private and public sectors. However, job seekers faced difficulties much earlier. Unemployment began rising in late 2007 and actually doubled from 5.0% in December 2007 to 10.0% in December 2009. During that time, unemployment among persons holding a bachelor's degree more than doubled from 2.1% to 5.0%, the number of multiple job holders declined, and those working part time for economic reasons increased.¹

States and municipalities have experienced differing impacts according to the relative influence of housing, manufacturing, and banking sectors on their economies. North Carolina has been especially challenged and ranks ninth in unemployment: 11.1% as of March 2010. Statistics confirm that the economic recession impacted unemployment

¹ U.S. Department of Labor (2007, April 27). *Labor force statistics from the Current Population Survey*. Accessed April 27, 2010. <<http://data.bls.gov/cgi-bin/surveymost?ln>>.

rates, which increased from 4.7% in August 2007 to 10.8% in August 2009. In 2009 North Carolina experienced a historical high in the unemployment rate at 11.1% in May, but recently surpassed this high in February 2010 at 11.2%.² The Triangle area that surrounds the capital of Raleigh has fared somewhat better, with unemployment remaining under 10%. However, the area also has many postsecondary schools that are experiencing mounting enrollments as high school students delay entry into the workforce and adults return to school to improve their prospects for employment.

These economic challenges present an opportunity for employers to hire and retain more educated workers. The potential benefits for organizations that conduct data collection may be significant, especially if more educated new hires can be demonstrated to improve productivity and response rates.

RTI Call Center Services (RTI-CCS) is a department within the Division of Research Services (DRS) within RTI International. RTI-CCS operates a state-of-the-art call center located in Raleigh, North Carolina; it is a 17,000-square-foot facility with 225 production stations for telephone interviewing, Web support, inbound call handling, tracing operations, and several quality control supervisor and quality expert workstations. A separate on-site training room is equipped with an additional 36 training stations. RTI-CCS prides itself on being technologically sound and prepared for the demands of modern data collection design. The call center is located in a controlled-access environment, ensuring the strict security of all data collection. RTI-CCS operates 7 days a week, providing production coverage 16 hours per day Monday through Thursday, 12 hours on Friday, and 8 hours each on Saturday and Sunday. Projects conducted through

² U.S. Department of Labor (2010). *Current unemployment rates for states and historical highs/lows*. Accessed April 27, 2010 <<http://www.bls.gov/web/laus/lauhsthl.htm>>.

RTI-CCS benefit from a relatively small supervisor to staff ratio (generally 1:10). RTI-CCS offers high-tech survey research interviewing services, and our data collection expertise covers a wide range of call center activities in our Raleigh call center or via our virtual call center model.

For this research, we identified two panel studies to explore whether changes in the economy affected the type of telephone interviewers hired in the call center and whether those hires impacted data collection. Project A was a national panel study of youth with disabilities for which parent and youth interviews are conducted every 2 years by telephone. Project A is in its tenth year and the waves considered for this paper occurred during spring 2007 and 2009. It offered a promised incentive for survey completion to parents and youth. Project B was a study of homeowners and renters, many from North Carolina, who were interviewed annually by telephone or in person. For the current research we considered just the 2007 and 2009 waves, because 2008 assigned some of the sample to field interviews. It offered a promised incentive for survey completion.

We sought to compare the situation in 2007, for which most of the calendar year was not designated as recessionary, with 2009, for which all months were so designated. The primary questions of interest were as follows:

1. How did staff attrition data compare between 2007 and 2009?
2. How did the education level of staff compare between 2007 and 2009 data collections?
3. Are completed surveys associated with interviewer education?
4. Assuming household unemployment increases availability to interview, were more surveys completed during the daytime in 2009?

The gradual reduction in work force within RTI-CCS, both voluntary and involuntary, displayed a significant difference during the economic recession in

comparison to attrition and termination outside of the economic recession. Attrition and termination rates within RTI-CCS are normally high for data collection efforts. Projects systematically include several training cycles in their budgets to replace telephone interviewers who have been released or attrited. Through analysis of the attrition and turnover data for Projects A and B, we intend to answer the research questions regarding whether staffing has been impacted during the economic recession.

All of the telephone interviewing staff recruited and hired within RTI-CCS are classified as temporary employees. Often referred to as contractual, our temporary employees may work full-time—at least 32 hours per week—or part-time—less than 32 hours per week. In our work environment, temporary employees are used to support the cyclical data collection projects that require frequent adjustment of staffing levels. All telephone interviewers recruited and hired for data collection projects within RTI-CCS undergo background checks to ensure that they are well-qualified and have a strong potential to be productive and successful. All RTI-CCS staff employment is at will: the staffing agency retains absolute discretion to change any or all of the terms or conditions of employment.

We used the following categories to classify the types of attrition and turnover encountered during the 2007 and 2009 data collection periods of Project A and Project B: Leave of Absence (LOA), No Call No Show (NCNS), Resigned, Promoted, and Terminated. The first category, LOA, represents the proportion of staff that has taken an extended period of unpaid time from work. NCNS, also considered job abandonment, is defined as not reporting to a scheduled shift and not calling out within 2 hours of the start of the shift. The remaining three categories' definitions are clear: "Resigned" refers to an

individual's formal notification to give up one's position, "Promoted" is the advancement in one's position, and "Terminated" is the end of one's employment contract.

The comparison and analysis of the Project A 2007 and 2009 data collection periods yielded some interesting results. In 2007 the project's attrition and turnover percentages were: LOA at 1%, NCNS at 22%, Resigned at 15%, Promoted at 4%, and Terminated at 12%. In total during the 2007 data collection period only 46% of the telephone interviewers were retained. In contrast, the 2009 attrition and turnover statistics showed that LOA had fallen to 0%, NCNS significantly dropped to 0%, Resigned slightly decreased to 13%, and Promoted was cut to 0%; Terminated was the only category that increased—to 14%. Overall, the proportion of telephone interviewers retained during the 2009 data collection period considerably improved to 73% (see Figure 1).

Project B demonstrated similar findings to Project A's comparison of 2007 and 2009 data. In 2007, Project B only retained 41% of the telephone interviewers while the remaining categories reflected LOA at 0%, NCNS at 12%, Resigned at 35%, Promoted at 0%, and Terminated at 12%. Analysis of the 2009 data revealed that the staff retained nearly doubled to 80% whereas NCNS, Resigned, and Terminated decreased respectively to 8%, 4%, and 4%. LOA remained at 0% and Promoted increased to 4% (see Figure 2).

One of the most significant findings from analysis of Project A and Project B attrition and turnover data is that the percentage of staff retained notably increased during the economic recession. These data support the suggestion that during the recession, employees were less likely to leave their current positions in RTI-CCS because they feared they would not be able to find other employment. The data also reveal that the voluntary attrition categories—LOA, NCNS, and Resigned—either remained constant or

decreased during the economic recession. This further solidifies our research findings that telephone interviewers were more likely to retain their positions, which positively impacts staffing within RTI-CCS. In contrast, the involuntary attrition and turnover data categories—Terminated and Promoted—did not show any correlation on impacts across both projects during the 2007 and 2009 data collection periods. From the data analysis, we can conclude that involuntary attrition and turnover did not have a direct impact based on the economic recession whereas voluntary attrition and turnover did.

Based on the analysis of attrition and turnover data across Projects A and B, we conclude that the recession actually had a positive impact on staffing because both projects were able to retain more telephone interviewers. The positive impact could be measured by the reduction in project costs and by the number of interviewers who developed experience on their project assignment.

Another issue is that the economic recession has increased the number of unemployed persons with education beyond high school. To examine staff hired for Project A and Project B, we categorized staff into three clusters: High School, Some Postsecondary Education, and Degree. Staff classified as “High School” were employees recruited who had obtained only a high school diploma. Staff classified as “Some Postsecondary Education” were employees recruited who had some education beyond high school, but have not obtained a bachelor’s degree. Staff classified as “Degree” were employees recruited who have obtained a bachelor’s degree or higher.

The 2007 data illustrate that 24% of the staff recruited for Project A had a bachelor’s degree, 48% had some postsecondary education, and 28% had only a high school diploma. In 2009, 28% of the staff recruited for Project A had a bachelor’s degree, 55%

had some postsecondary education, and 17% had only a high school diploma (see Figure 3). As a result, the percentage of staff employed who held a bachelor's degree increased by 4%, staff employed who had some postsecondary education increased by 7%, and staff employed with only a high school diploma decreased by 11% in 2009.

The 2007 data illustrate that 47% of the staff recruited for Project B had a bachelor's degree, 24% had some postsecondary education, and 29% had only a high school diploma. In 2009, 46% of the staff recruited for Project B had a bachelor's degree, 29% had some postsecondary education, and 25% had only a high school diploma (see Figure 4). Results for Project B show the percentage of staff employed with a bachelor's degree slightly decreased by 1%, staff employed with some postsecondary education increased by 4%, and staff employed with only a high school decreased by 4% in 2009.

Overall, job loss due to the economic recession has inflated the number of unemployed persons with education beyond high school. In comparing the education levels of staff hired in 2007, for which most of the calendar year was not designated as recessionary, with 2009, for which all months were so designated, results indicate that RTI-CCS was able to recruit more staff with education beyond high school during the economic recession. Although staff hired with a bachelor's degree decreased by 1 percentage point from 2007 to 2009, in general, the statistics show positive impacts on RTI-CCS due to the economic recession.

The last analysis performed was to determine whether the distribution of survey completions according to time of day changed from 2007 to 2009. Fewer evening completes in 2009 might suggest that sample members were more available during

daytime hours, possibly due to a reduced number of work hours or because they had been laid off.

We created a dummy variable for each interviewed case indicating whether the final completion was assigned in the case management system after 5:00 p.m. The results showed essentially no change. In both years, 60% of all completions in Project A occurred after 5 p.m. (see Table 1). Project A had virtually no change between study years; 48% of survey completions occurred after 5 p.m. in 2007, compared to 50% in 2009.

We also evaluated the relationship between survey completion and interviewer education. Interviewers were classified as having completed high school, some postsecondary school, or college. For Project A in 2007, telephone interviewers with a college degree comprised 24% of the telephone interviewers and completed 19% of the interviews (see Table 2). In 2009 those telephone interviewers comprised 28% of the staff and completed 24% of the interviews. Therefore, the proportion of college-educated telephone interviewers increased 17% while their contribution to completions increased 47%.

For Project B, the proportion of college-educated telephone interviewers remained virtually unchanged; in 2007 they comprised 47% and in 2009 they comprised 46%. However, their contribution to completions on the project increased to 44% in 2009 from 36% in 2007, a 22% relative increase from 2007. Also interesting is the fact that staff with some postsecondary education increased from 24% to 29%, yet their contribution of completes declined from 38% to 28% of the overall totals.

If one predicts calls-to-complete on interviewer education and no other predictors for interviewer or respondent characteristics, Project A staff with high school education took about three fewer calls-to-complete compared to staff with a college education. Staff with some postsecondary education had about the same number of calls-to-complete as staff with a college education. Staff with some postsecondary education took two to three more calls-to-complete compared to staff with a college education. This was true in 2007; the model for 2009 was not viable because the estimator was biased. This would lead one to expect that other factors not accounted for in this basic model determine number of calls-to-complete. Equivalent numbers for Project B were not available at the time of this writing.

In conclusion, the unfortunate events of the economic recession negatively impacted unemployment rates and business industries in the United States. Contrary to the overall negative impact on the economy, RTI-CCS reaped several beneficial outcomes during this time period. First, attrition rates decreased, so RTI-CCS was able to retain its staff throughout data collection. This proved beneficial in that projects were able to limit attrition training costs while retaining experienced telephone interviewers. Second, the number of staff hired with higher education levels increased during the economic recession. It is demonstrated that staff with higher levels of education account for a greater percentage of data collection completes. Although interviewers with a college degree completed more interviews, they averaged more calls to do so, especially in comparison to interviewers with a high school education. This might reflect greater persistence among college-educated interviewers calling the hard-to-reach cases or it may have reflected some other factor, such as the shifts they tended to work.

Appendix A

Figures and Tables

Figure 1. Attrition Categories and Percentage Reported for Project A by Year

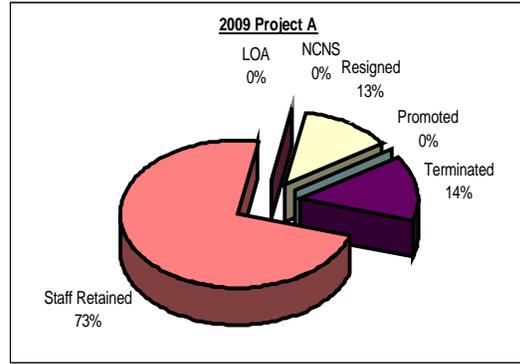
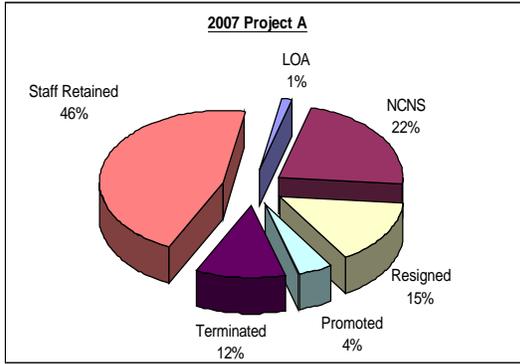


Figure 2. Attrition Categories and Percentage Reported for Project B by Year

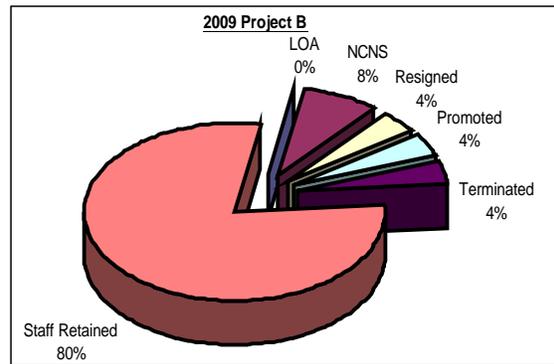
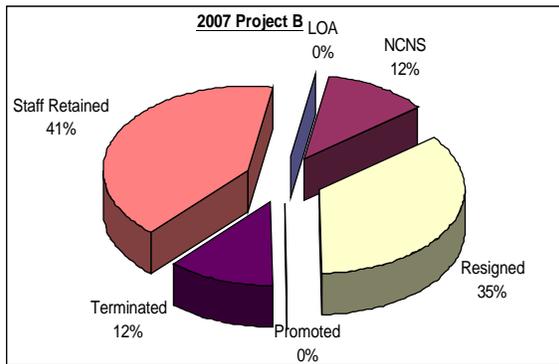


Figure 3. Educational Level Reported by Project A Telephone Interviewers by Year

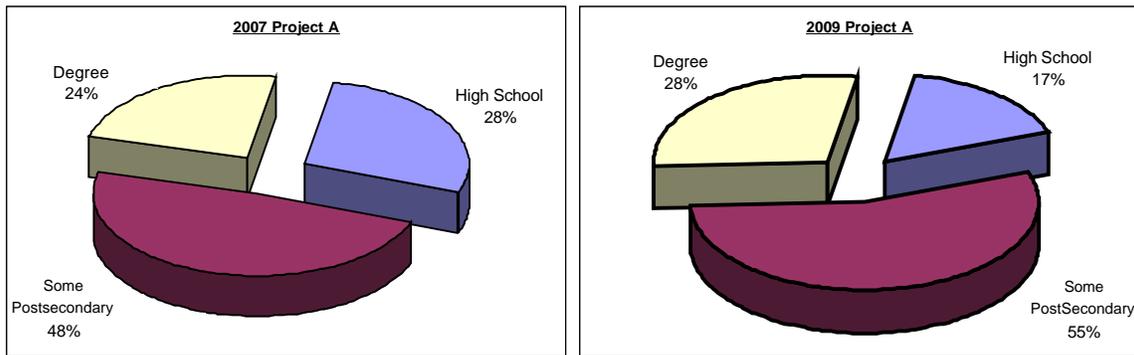


Figure 4. Educational Level Reported by Project B Telephone Interviewers by Year

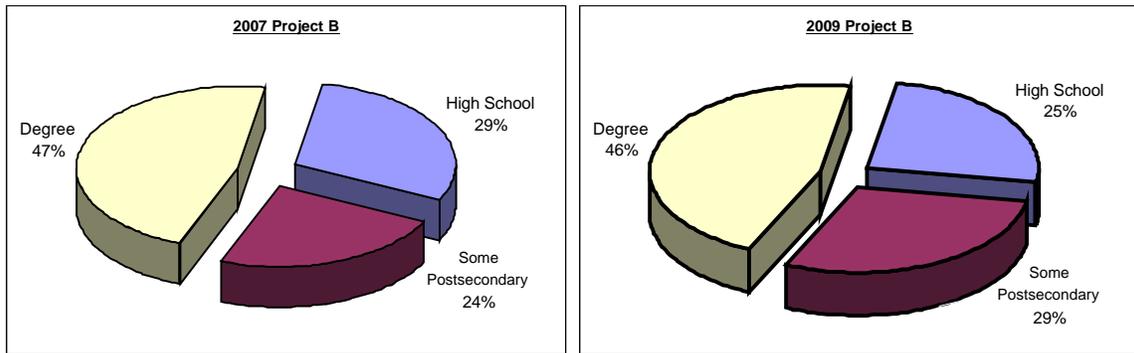


Table 1. Proportion of Interviews Completed During Evening Hours

Project	After 5 PM (%)
Project A	
2007	60
2009	60
Project B	
2007	48
2009	50

Table 2. Proportion of Interviews Completed by Interviewer Education

	Proportion of Project Staff	Average Completions per Staff	Proportion of Completes by this Group
Project A			
2007 n=3,806			
High School	28	37	19
Some Postsecondary	49	73	64
College	24	42	18
2009 n=3,665			
High School	17	29	10
Some Postsecondary	55	56	65
College	28	40	24
Project B			
2007 n=2,955			
High School	29	151	26
Some Postsecondary	24	283	38
College	47	133	36
2009 n=3,253			
High School	25	152	28
Some Postsecondary	29	130	28
College	46	130	44