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Millennials in Southern Illinois

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Abstract

In Spring 2014, the Paul Simon Public Policy Institute at Southern Illinois University Carbondale sponsored a poll of Illinois’ Jackson and Williamson counties with the University of Illinois Springfield Survey Research Office. The objective of the project was to examine at length how residents of the area felt about life, the economy, and a variety of other topics. In an effort to take the data collected by this survey and provide results that can be used and interpreted by the local community, especially politicians and leaders, this project seeks to examine the differences between young, voting-age citizens and the rest of the population. Beyond this, it examines how being young affects the worldview of individuals. To represent young people, I chose millennials—those born in 1980 and after—in order to provide enough respondents for significant results. Furthermore, millennials make an intriguing group to scientifically study because they receive frequent media attention for their perceived differences from older generations. Because they came of age in a very different public climate from their predecessors, I hypothesize that millennials differ significantly from the rest of the population. Specific areas of focus as dependent variables include daily news media consumption, economic factors, and quality of life. After running a series t-tests, OLS, Logit, and Multinomial Regressions, there was support for the hypothesis in some instances. Overall, however, there was not enough support to reject the null hypothesis of no difference in millennials.

Introduction

Southern Illinois, as a region, has been struggling for long enough to be compared to some of the consistently weakest areas in the country. The 2007 Southern Illinois Regional Assessment – Executive Summary from University of Illinois Urbana-Champaign’s Southern
Illinois Regional Assessment Project concluded that the area “fits the statistics of a persistently poor region” (Flint and Gasteyer, 7, 2007), in spite of the fact that the report predates the recession that began in late 2007. Additionally, both Jackson and Williamson counties lag behind the state averages for key economic indicators such as poverty rate and median household income; Williamson is slightly behind in both, while Jackson has over double the poverty rate and approximately 60% of the state median household income. A table with exact figures can be seen in Appendix 1 (State, 2015). In early February 2015, the right-leaning Illinois Policy Institute published a list of five main ways the Illinois economy was failing and five suggestions for fixing it. One of the largest reasons is the abysmal employment rates of young individuals and black men in the state. Both of these demographics are at the basement of the Midwest, with over half of black men and historic numbers of millennials finding themselves unemployed (Lucci, 2015). Leaders in southern Illinois are aware of these problems yet continue to be unable to effectively slow or reverse the trends.

This paper analyzes how being a millennial, which is defined for the purposes of this research as being born on or after 1980, in Jackson or Williamson Counties (in Illinois) effects how respondents feel about a variety of area issues, with an emphasis being placed on fiscal policy, community economic development, and media consumption. As mentioned above, the millennial generation is being used to represent young people, and the issues examined in this paper are not necessarily exclusively applicable to millennials rather than a differently defined youth variable. To help stimulate an area-wide discourse on the quality of life and methods of improvement, the Paul Simon Public Policy Institute (hereafter PSPPI) at Southern Illinois University (hereafter SIU) teamed with the Center for State Policy and Leadership of the University of Illinois Springfield Survey Research Office (hereafter SRO) to sponsor a poll of
Jackson and Williamson Counties. The Jackson/Williamson County Survey (hereafter JWCS) was conducted from February 20 to April 7, 2014. Conducted by trained interviewers, JWCS saw 592 respondents (254 from cell phone) complete the entire series of questions. The data was weighted for probability sampling and 2012 US Census Bureau population estimates and a margin of error of +/- 4.0%. (Jackson, 2, 2014)

This project seeks to examine the differences between young people, defined as millennials, and the rest of the population in Jackson and Williamson (Illinois) Counties. Using the data analysis software Stata, results from the JWCS were run through a range of models including T-Test, OLS Regression, Logit, and MLogit. I hypothesize that millennials differ significantly from the rest of the population in their opinions on local economic and community development issues. The null hypothesis is that millennials do not differ significantly from the rest of the population, making this a two-tailed test. First, I will examine existing research on young voters throughout time, specifically millennials, as well as look at other widely trusted current polls. Following this, I will explain my data and variables and then describe the specific methods I use. I conclude by analyzing and discussing the results of the Stata models and conducting a review of how this work could be improved going forward.

Literature Review

To begin examining how young people, specifically millennials, differ from the rest of the population, I examined widely accepted, long-term trends among young people. This began with the eleventh edition of Political Behavior of the American Electorate, published in 2006. By Flanigan and Zingale, Political Behavior does rely on examples from when it was published several election cycles ago. Regardless, the observations and conclusions made about young
people are still accurate a decade later. Within a given year, young individuals are more likely to
be politically independent than older generations. (Flanigan, 2006) There are several leading
current theories on why this occurs, including disinterest in candidates that ignore the interests of
young voters in favor of those of the more prevalent elderly voters. (Wattenberg, 2011) Another
current theory, most recently supported by the paper “Candidate Age and Youth Voter Turnout”
by Pomante and Schraufnagel in the journal American Politics Research, is that voters are more
likely to support candidates who they identify with, and there are very few young candidates
across the political landscape. (Pomante and Schraufnagel, 2015) One interesting note is that,
although millennials are currently the most likely to be politically independent, this difference is
not as great as it was between age groups during the tumultuous decades in the mid-twentieth
century. A separate project, or one with a greater scope, could potentially examine how the
youngest voting-age members of the population differ as a group from year to year. (Flanigan
and Zingale, 2006)

It is expected in elections that the youngest eligible voters will have the lowest turnout
rate of all age groups. The scope of this is not necessarily appreciated, however. Since 1972,
even though the voting age was lowered to eighteen, turnout has averaged a decline among the
youngest voters. While survey data taken from elections, especially presidential ones, suggests
that the likelihood of voting increases as age increases, sample bias and dishonest responses
about voting make establishing a significant relationship and an effective model very difficult.
One interesting finding that Flanigan and Zingale make is that the Life Cycle Effect, the theory
that individuals become increasingly Republican as they age, is not significantly supported in a
controlled model. This finding aside, millennials are still the most likely to be politically
independent. (Flanigan, 2006)
After looking at historical trends, I focused on recent—the 2008 election or later—poll and survey data. Across the board, a 2011 Gallup poll showed an observed decrease in confidence in government institutions (Saad, 1, 2011). While a trend across all categories might not mean much for comparing current groups, this decrease could lead to long-term disillusionment within millennials that carries forward and affects future generations. This is admittedly an extreme scenario and one that would need to be explored in separate research, but it shows the potential impact of the millennial group. The Center for Information and Research on Civic Learning and Engagement (hereafter CIRCLE) did extensive research on millennials during and after the 2008 presidential election. The increase in young voters caused by President Obama’s youth appeal provided unprecedented opportunities to examine poll and survey data for this group. In a 2008 survey, CIRCLE found that only 21.4% of young adults generally trusted other people. This was by far the largest of all age groups and is consistent with Gallup’s findings. (Youth, 2014)

These quantitative findings are supported by qualitative studies. Bradley Bosserman of the progressive-leaning Roosevelt Institute theorizes that this distrust is because the millennial generation came of age in the post-Reagan Revolution era of government blaming. By the time of the Gallup poll cited previously, cynicism and negativity towards government had been decreasing steadily for over a decade. (Bosserman, 1, 2012) Another theory, according to Teresa Taylor, a former government management fellow with the city of Decatur, GA and a current assistant to the city manager in Chamblee, GA, is that recent college graduates are facing historically high levels of uncertainty. In her September 2014 piece in the journal Public Management, she writes that this uncertainty results from slow economic recovery from the 2008-09 recession, student loan debt, and a lack of a sense of stability. As a result, young people
are settling for jobs for which they are either overqualified or uninterested. Settling, combined with private sector jobs that pay higher than those in the public sector, is leading young people away from seeing government as a reliable institution. (Taylor, 2014)

Perhaps the most valuable existing piece of literature for comparing with this study is the semi-annual Harvard University Institute of Politics Survey of Young Americans’ Attitudes Toward Politics and Public Service. With Spring 2015 marking the 27th edition since its Spring 2000 debut, the publication is able to look at the data from respondents across the country both as an isolated snapshot and over a fifteen-year time series. In order to maximize the similarities and comparability between the Harvard survey and the JWCS used here, I have primarily used the Spring 2014 survey (25th Edition) as a comparison. With a sample size of N=3,058 and a margin of error of +/- 1.8%, the survey gives me the best opportunity to compare the rest of the country to Jackson and Williamson counties. (Survey, 2014)

While that entire poll is not relevant to this project, some of the results are useful. Interest in voting in the midterm election, for instance, was lower among millennials before the vote in 2014 than it was in 2010. This could potentially support findings of lowered satisfaction and confidence in government in this project. Supporting the finding that young people are the most politically independent, the Harvard poll finds a percent of respondents who identify as Independents staying relatively constant at about 40%. One interesting note from this survey is the slight-yet-remarkable increase in Republicanism among the youngest voting age. (Survey, 2014) In addition to the spring 2014 survey, the fall 2013 survey also had several timely and relevant conclusions. It found that young respondents, regardless of party affiliation, agreed with the Buffet Rule (defined as taxing income above $1 million) as the most preferred from a provided list of deficit reduction methods. This could support findings of significance in the way
being a millennial effects support for different tax policies. The Fall 2013 survey also found significant disapproval for the current state of politics. (Survey, 2013)

**Data**

The dataset used for the completion of this research comes from the Paul Simon Public Policy Institute’s 2014 Jackson/Williamson County Survey. Designed and analyzed in part by PSPPI Visiting Professors John Jackson and Charlie Leonard, the JWCS is used here with permission from the institute. Over the month and a half that the poll was conducted, 592 respondents completed the entire survey, with landlines making up 347 responses (12.9% response rate and 24.7% cooperation rate), and cellphones making up the remaining 245 subjects (6.1% and 9.3% response and cooperation rates, respectively). Millennials account for 67 of the respondents, making up 11.32% of the sample.

In order to estimate models as accurately as possible, a variety of demographic questions were recoded and formatted. The primary independent variable (hereafter IV) is the dichotomous variable coded 1 for millennials and 0 for non-millennials. For the purposes of this project, all non-dependent variables are listed as IVs; however, all IVs except for the millennial variable were used as controls and were not studied for their impact. Separate projects could examine these or similar factors. A second variable was made for age\(^1\), this time on the original continuous scale. As another IV, I coded the gender variable to be dichotomous for female. Due to the fact that a categorical race value is very difficult to analyze with, I recoded dichotomous Black, Hispanic, Asian, and Other variables. I left income as a continuous variable, with its on edits being dropping the values that were unsure or refused. The religious affiliation and

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\(^1\) The age variable was dropped as a control from the final models. An more detailed explanation can be found in the Methods section on Page 9.
attendance variable was recoded to be dichotomous with any religious attendant, regardless of affiliation, being marked a 1. I reverse coded ideology from extremely conservative to extremely liberal and used it as an IV in the advanced models and a DV in one of the T-Tests. The final two independent variables were also dichotomous: southern Illinois native and voter registration.

The dependent variables are distinguishable into several separate types. The first group of variables is all dichotomous and deals with methods of daily news media consumption, including television, radio, online and newspaper. The next pair of DVs are both multinomial measure support for publicly funded improvements to local infrastructure and transportation. They are coded so support for a property tax increase is 1, a sales tax increase is 2, and no tax increase is 3 (and is used as the base in the Multinomial Regressions). The next group of DVs are all coded to be ordinal: perceived importance of community development (1-4 scale, low-high), support for labor training programs (1-5, low-high), rank of quality of life (1-3, fair-good-excellent), and confidence in local leaders (1-4, low-high). The final two DVs were recoded to be dichotomous measuring if the community is on the right track and if life is improving over the previous year.

Methods

Since this paper examines how the millennial variable describes a variety of different types of data, several different analytical methods were used. The first step was looking through the JWCS data and finding potential variables of interest. To conduct an examination with practical potential uses for the region, I decided to incorporate several economic or standard of...
living-based dependent variables. I have done multiple projects focusing on millennials from this poll in the past, but this one was expanded to include a wider variety of advanced analytical methods and a more descriptive panel of independent variables. Selecting the DVs was followed by choosing the control variables (non-focal IVs) to be run with each model. The variable-selection process, including Stata commands, is described in greater detail in Appendix 2.

Since the primary goal of this project is to examine differences between millennials and non-millennials, two-tailed t-tests by millennial for a number of different variables were run. These tests measure the differences between the means of the DV for both IV values. For example, a difference of -0.3 would mean millennials return a score for that variable that is lower by 0.3 than non-millennials. Each t-test takes only one step, so in order to efficiently run those, a second do-file was made to immediately follow the first.

With the most basic preparations (variable generating and coding) and analyses (t-test) mapped out and saved to a do-file, I was able to devote a significant amount of time to running multiple diagnostics and specificity tests. The original descriptive variables I used were millennials, age, female, black, income, ideology, and voter registration. Because age and voter registration were potentially similar to the millennial variable, those variables were put through specification tests for multicolinearity. Both ended up being dropped from the variable set, which was expanded to include race variables Hispanic, Asian, and other in order to properly establish white as the race dummy variable. Whenever appropriate, Reset tests were conducted to ensure optimal specificity. The final diagnostic run on the data was the Breusch-Pagan Test for heteroskedasticity. Heteroskedasticity, which is a non-regular relationship between the DV and primary IV, affects the standard error of each category. This test is applicable only on OLS
regressions, and all four in this model displayed heteroskedasticity. To correct this, all regressions were run as robust to adjust the standard error.

Although the advanced commands were run in order from the original survey during the actual modeling process, for the sake of space I am going to present them by type here. Multinomial Regressions (mlogit), which show the effect of each independent variable on each category of the dependent variable, was run for the infrastructure and transportation funding variables and for changes in quality of life over the previous year. The base of the two tax variables was set at 3, which was the value assigned to “no tax increase”, and the base of quality of life was set at 4, which is the value assigned to the response “did not live here.” Each of these was also run with the rrr add-on and the separate prchange command. For the OLS regressions, the commands for the first four lines each do-file is the following: regress..., ovtest, estat hettest, regress...,robust. The second half of each OLS do-file included estsimp with 1000 simulations, setx, and simqi...for the first difference. Comdev, train, live, and leadconf were all run through the regression commands. The final advanced command run was Odds-Ratio logit for underemp and righttrack, which is used for dichotomous dependent variables. For all three advanced methods, as well as the basic commands, a P-value <.05 means you reject the null at 95% confidence. A P<.05 means the model supports, or at least fails to disprove, the alternate hypothesis.

Results

In order to make most efficient use of space and time, the variables are presented in this section according to the command they were run under, not the order they were run or the issue area they address. All four commands—ttest, mlogit, regress, and logit—have been consolidated
from individual tables by dependent variable and method to group tables by command. Table 1, below, shows the results of the t-test for each of the selected variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Diff.</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV</td>
<td>*-0.1898</td>
<td>0.0529</td>
</tr>
<tr>
<td>Radio</td>
<td>0.0242</td>
<td>0.0643</td>
</tr>
<tr>
<td>Online</td>
<td>*0.2182</td>
<td>0.0636</td>
</tr>
<tr>
<td>Newspaper</td>
<td>-0.2322</td>
<td>0.0644</td>
</tr>
<tr>
<td>S. Il. native</td>
<td>0.0518</td>
<td>0.0659</td>
</tr>
<tr>
<td>Religious</td>
<td>*-0.2191</td>
<td>0.0632</td>
</tr>
<tr>
<td>Ideology</td>
<td>0.0039</td>
<td>0.2168</td>
</tr>
<tr>
<td>Voter Reg.</td>
<td>*-0.1844</td>
<td>0.0302</td>
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</tbody>
</table>

*significant at 95% confidence

Table 1: T-Tests for selected variables by **millennial**

When operated in a t-test, the null hypothesis of no significant difference between age groups is rejected for the variables TV media consumption, Online media consumption, religious attendance (Religious, above), and voter registration (Votereg, above). At 95% confidence, millennials get 19% less daily news from TV than older respondents, 22% more daily news online, attend religious service 22% less, and register to vote about 18% less. Half of the t-tested variables support the alternate hypothesis. The lower rates of voter registration and religious service attendance are supported by both general public understanding and the research described previously in this paper. That millennials get significantly more news online is not surprising, but the deficit in daily TV news could be surprising at first glance. However, this could be described by an increase in the amount of news individuals are receiving in real time on their computers and phones. This would reduce the need or desire to forego watching more enjoyable programs in favor of nightly news broadcasts. For the insignificant variables, millennials
consume 2% more daily news on the radio than older generations, read the newspaper 23% less, are southern Illinois natives 5% more, and are 0.4% more liberal.

Table 2, seen below, shows the consolidated results of the robust regressions following the four variables being run through it as well as the simqi first difference test.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coef.</th>
<th>Robust SE</th>
<th>FD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Development</td>
<td>0.0662</td>
<td>0.1157</td>
<td>0.0663</td>
</tr>
<tr>
<td>Training Programs</td>
<td>-0.3817</td>
<td>0.151</td>
<td>-0.3835</td>
</tr>
<tr>
<td>S. Il. Native</td>
<td>-0.1933</td>
<td>0.1255</td>
<td>-0.1992</td>
</tr>
<tr>
<td>Local Leader Confidence</td>
<td>-0.1289</td>
<td>0.1042</td>
<td>-0.1352</td>
</tr>
</tbody>
</table>

*=significant at 95% confidence

Table 2: Robust OLS Regressions by millennial

Regressing the variable for how important people view workforce training is the only regressed variable that supports the alternate. The null is rejected, and being a millennial decreases the perceived importance of labor education programs by almost 0.4. Since millennials, on average, have been alive and in the workforce for a shorter time than non-millennials, it would make sense that they did not value workforce training as highly as individuals who had seen its benefits. Being a millennial increases the perceived importance of community development by 0.06, decreases opinion on quality of life in the area by 0.2, and decreases confidence in local leaders by about .13.

The odds-ratio logit, due to its necessity for a dichotomous dependent variable, is a less-frequently used method. Only two variables, underemployment and if area is on the right track, were run as logits, and the consolidated results are in Table 3.
Neither category is significantly impacted by being a millennial. One reason for this could be struggling employment rates for all ages in the area. Another potential cause of the insufficiency could be that grown adults who would ordinarily prefer a full-time position are forced to work part time, a situation likely to be categorized as underemployed. Although neither variable produced significant results, millennials are 94% likely to see themselves as underemployed, and 14% more likely to think their region is in on the right track.

The final advanced method ran was the multiple regression with an isolated base. Mlogit shows how each independent variable in a model effects every category in the dependent variable. The column “RRR” in Table 4 shows the being a millennial makes one 57% more supportive of a property tax increase and equally as supportive of a sales tax increase compared to not raising new taxes.
Conclusion

This paper has sought to examine how millennials in Jackson and Williamson Counties view their surroundings differently from the rest of the population, with the hope of advancing a body of knowledge on southern Illinois consumers. After reviewing relevant existing literature on this topic, I hypothesized that there was a significant difference between millennials and the older respondents, with the null hypothesis being that no difference exists. The *millennial* variable came back as significant for some of the variables, but it came back insignificant for the majority of the models. Therefore, while there is limited support for the alternate hypothesis, this project fails to reject the null hypothesis.

Several factors could contribute to the limited significance found during this project. For the insignificant T-Tests, the cause could be as simple as millennials do not differ from the rest of the sample on certain issues. Another potential contributor to insignificant models is the design of this research itself. Rather than trying to identify the IVs that best explain a DV, I look at the ways one specific IV influences the DV while controlling for other IVs. The problem with...
this strategy lies in the fact that new Stata commands would need to be run for each potential model or variable simply to potentially alter the significance of a separate variable. The model specification tests (Link Test, Ramsey Reset Test, fitstat, and J-Test) would then have to be repeated for each major method (when applicable). While comparing the results for the same controls across several different DVs is effective, time-series analysis or dependent-focused studies are much easier to design, measure, and control.

The more advanced methods, for their part, incorporate so many different elements that it can be extremely challenging to identify what it was that caused unexpected results. Almost every question asked in the survey, and therefore almost every variable used in model construction, provided respondents the opportunity to select “refuse” or “don’t know.” While these are important to include in order to have the most accurate survey possible, they are unhelpful and get dropped from the recoded variables. Dropping the obscure responses provides useful information, but can also result in a slight bias from missing variables. Since most variables, especially the DVs, have dropped responses, a slight effect could be felt throughout the work. An additional problem is the scope of the JWCS. The survey, which took an estimated 30 minutes to complete according to Dr. Leonard, asks such a large number of questions that each dependent variable could easily be tied to multiple independent variables. Even though the Ramsey Reset Test was run for each regression and came back without recommending any additional variables, this dataset includes so many possible contributors that insufficient model specificity remains a suspicion.

The poor economic landscape described in the introduction of this paper naturally suggests the presence of a multitude of opportunities to help correct the situation. Since no single policy or idea is going to make the necessary changes, it is important for leaders to get as
complete and clear of a grasp of their situations. By focusing on young people only in their counties, this project seeks to offer these leaders a unique perspective on their situations. With Southern Illinois University Carbondale and multiple community colleges, Jackson and Williamson counties have a large supply of millennials. By knowing what types of services (such as media consumption and religious attendance) young people prefer, local businesses can take better advantage of a massive potential client base. Knowing what millennials see in their communities as most needing improvement, how they prefer to fund these improvements, and how life is changing on a yearly basis can offer politicians opportunities to make policies that will engage and excite their youngest potential votes.

How millennials view their surroundings has implications beyond economic and community development. Political campaigns, from the top of the ticket to the bottom, have benefitted in the last few election cycles (since 2008) from a dramatic increase in information on voter preferences. This is made possible by improvements to data collection and analysis and more effective modeling. The Obama campaigns in 2008 and 2012 are prime examples of data utilization, as advertisements and communication with supporters could be customized to target groups and individuals better. Since state and local-level candidates face enormous gaps in campaign financing and resources, it would be more or less impossible for a candidate to be able to afford data collection, nonetheless garner enough responses to have a useable sample. However, research done by the highest level of a party, especially when it relates to specific areas or demographics, can be used by candidates at lower levels of that same party. Local politicians and decision makers can benefit from new, improved information on their populations.
On the whole, this project failed to reject the null hypothesis that millennials are statistically insignificant from non-millennials. While being a millennial had a significant impact on a few variables, most of the significance was supported and predicted by existing literature. In spite of the lack of statistical significance in this project, there is still a lot to be learned from studying how young people, the future decision makers and drivers of the economy, view the world around them.
Works Cited


Jackson/Williamson County Survey. (2014). *Paul Simon Public Policy Institute*.


Youth Attitudes and Beliefs. (2014). *Center for Information and Research on Civic Learning and Engagement*
Appendix 1: Detailed Economic Comparisons

<table>
<thead>
<tr>
<th></th>
<th>Illinois</th>
<th>Jackson County</th>
<th>Williamson County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty Rate</td>
<td>14.1%</td>
<td>30.4%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Median Household</td>
<td>$56,797</td>
<td>$33,479</td>
<td>$43,125</td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Economic indicators for Jackson and Williamson Counties and the state of Illinois. All figures are based on data collected by the United States Census Bureau from 2009-2013 and were most recently corrected on April 22, 2015.

(State, 2015)
Appendix 2: Variable Selection Process

One of the most crucial parts to the integrity of this project was the generation and recoding of each variable based on the original data set in a manner that did not bias the results of my experiment. After several failed attempts, including accidentally making every variable dichotomous and originally forgetting to include all of the non-dummy variables for race, the data and variables were set in place. For the recoding steps, along with a couple other methods listed below, a do-file was created with `gen`, `recode`, and `order` being the only commands used.