**Team A : A Political Survey of the CMU Community**  
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**Introduction**

We had many motivations for conducting our proposed project on the political attitudes of members of the CMU community. The two major questions we wanted to answer were could we predict a CMU student or faculty member’s political affiliation or election behavior based on information on their demographic, such as their race, religion, gender, age, etc. We also wanted to answer the question of how representative the CMU community’s voting practices were of the voting practices of the United States as a whole. The reason we felt that this survey was important to conduct was that this is an election year.  This means people will be very interested in people’s political tendencies in order to get a better idea of what the outcome of this election could be as well as how to possibly sway the votes. In addition, a lot of people consider the youth to be the deciding factor in the election, which means that many people want to know the tendencies of college students, who are often new to voting. Many also believe that there is apathy among people who have just reached voting age. The information from this research could provide important insight that could give ideas of how to increase voter participation in the presidential election.

**Methodology**

*Sampling*

The target population is all of the students, faculty, and staff from the Pittsburgh campus of CMU. We do not intend to generalize to a greater population such as all US universities. Our sampling frame is all faculty, students, and staff that can be accessed using emails from the C-Book. We sampled every tenth person in the C-Book, skipping ineligible units such as our group members or nonhuman entries (such as CMU Emergency Medical Services). We expect to have some coverage error because C-Book does not include email addresses for everyone in our target population. However, since the vast majority of students and faculty have school-provided email addresses, we can cover most of our population using this frame. There will also be slight error due to the fact that our sampling is not a true simple random sample because not everyone had an equal chance of being sampled. For example, students with the same last name had virtually no chance of both being sampled.

The students chosen to be sampled will be emailed a link to our online survey via SurveyMonkey. We expect a significant amount of nonresponse error due to students ignoring our email. We are attempting to minimize this error by re-contacting those who do not respond to the survey after our first contact. There will also be selection bias because those who feel very strongly about politics will be more likely to respond.

We are also aware of the possibility of measurement error if students are unwilling to disclose their political beliefs or perhaps even QPA. In order to minimize this error we will assure the respondents that the results will be kept anonymous. We will protect their privacy by giving each respondent a unique ID number. The ID number will be entered at the beginning of the survey and will only be used to keep track of who has not yet completed a survey in order to recontact them.

There are 10,266 units in our target population. Since many of our questions are binary, we assumed a standard deviation of .5 and are hoping for a margin of error of .05. In this case, we did a calculation for a sample size without replacement using the standard formula for finding a sample size ((1.96^2)\*(SD^2)/(ME^2)), then multiplying it by the population size and dividing that by the population size plus the calculated sample size.

(1.96^2)\*(0.5^2)/(0.05^2)= 384.16

384.16 \* 10266/(10266+384)= 370

Because we expect a response rate of between 20% to 30%, we needed to sample about 1000 units. Sampling every tenth person in C-Book gave us 1102 people in our sample. Thus far, we have contacted all 1102 and have received 170 responses. We are currently in the process of recontacting those who didn’t respond. We consider any survey with more than two questions unanswered a “nonresponse”.

The survey had

* 10 demographic questions
* 11 Likert questions of which 4 were anchoring vignettes
  + The anchoring vignettes were meant to gauge the respondent’s response to the previous question “How much have you been following the Republican primaries?”
  + Other Likert questions included questions asked respondents to rate their
    - views on economic issues on a scale from very pro-government regulation to very pro-unregulated private
    - views on social issues from very liberal to very conservative
    - political preferences from strong to weak central government
* 2 multiple choice
* 1 ranking in which the respondent was asked to rank the candidates in the order that he/she would vote for them
* 1 free response in which the respondent was asked to name the candidate for the Republican nomination

*Post-Survey Processing*

After we compile all of our results we will need to post-stratify to separate the students from the faculty. We also may need to weight certain underrepresented groups.

**Results**

Of the 10,266 members of the CMU community we sent surveys to 1102. 169 respondents started the survey. This means our response rate is15% before recontacting.   
  
The focus of our survey is to explore the stances of members of the CMU community in terms of social, political, economic, and election issues. Particularly, we are interested in how these measurements vary with respect to their demographic information. We are also interested in measuring how representative the CMU community is of the US population.  
  
*Demographic Information*  
We measured the following demographic variables:

* age
* gender
* ethnicity
* religious affiliation
* residence
* departmental affiliation
* QPA

Once available, we will include frequency distributions and summary stats for each.  
  
*Stance*  
We will code the following stance variables:

* informedness
* political stance
* social stance
* economic stance
* election stance

*Relationship between Demographics and Stance*  
Because we measure a large number of variables, it seems wise to cluster each data point to see if any interesting groupings occurred:  
  
[cluster plots, e.g. Age vs. Gender, labeled by informedness]  
  
From the cluster plots, we can see which variables are more related and perform deeper analyses. For these we will run ANCOVA or ANOVA or Chi Square tests to test their relationships.  
  
*Comparison to the US Population*  
<http://www.iop.harvard.edu/Research-Publications/Survey/Fall-2011-Survey>  
We examined our coded responses and compared them to those of the Fall 2011 Harvard University Institute of Politics survey.  
  
[each relevant statistic from Harvard survey vs. equivalent from ours]

**Discussion**

We see this survey are serving two large purposes--letting us get an idea of the CMU community’s political informedness and their leanings. Both of these questions seem to be answered to some extent by the data we have received. There are some concerns that exist about the representativeness of our sample (should be addressed before next draft). Undergraduates, specifically freshmen and Sophomores are overrepresented in our respondents.   
  
From the results that we have received thus far it appears that on most scales our community members tend to be more liberal in a number of measures including self rated party identification and candidate preference. Additionally they do not tend to think of themselves as particularly well informed of the current primaries or political race.  Attitudes towards the government are generally pessimistic and the majority of our respondents do not feel like the government is doing enough to serve them effectively.     
  
We measured the issues that individuals felt were most important and interestingly enough healthcare policy was found to be the most important issue, closely followed by alternative energy research, science/tech research, education reform and addressing unemployment. The least important issue by far was Marijuana legalization.    
  
The majority of these findings are not particularly interesting or unique, rather the interesting findings will come when we have our completed data set and are able to make comparisons across demographics (professors vs students, majors, etc).  From what we have seen the stereotypes that colleges are generally more liberal places does seem to hold.    
  
One area where our survey is very strong is in its breadth, it covers a lot of topics and gives a pretty broad picture of the political landscape of CMU. Because of this there is a definite tradeoff in terms of depth--we do not investigate enough issues in enough detail and some of the questions may capture different ideas because these large concepts can be interpreted various ways.

**References**

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* [“College Students and Politics: A Literature Review” by Ross P. Meyer and Nicholas V. Longo](http://www.iop.harvard.edu/Research-Publications/Survey/Fall-2011-Survey)<http://www.civicyouth.org/PopUps/WorkingPapers/WP46LongoMeyer.pdf>

**Appendices**

**A. Questionnaire**  
Background Questions:

1. What year were you born?
   1. (drop down with 1900-2005)
2. Please specify your race/ ethnicity (check all that apply):
   1. American Indian
   2. Asian
   3. Black or African American
   4. Native Hawaiian or Other Pacific Islander
   5. White
   6. Hispanic and/or Latino
   7. Other (please specify)\_\_\_\_\_\_\_\_\_\_\_
3. What is your religious affiliation? (randomize order on survey)
   1. Catholic
   2. Protestant
   3. Jewish
   4. Muslim
   5. Atheist
   6. Agnostic
   7. Buddhist
   8. Unitarian/ Universalist
   9. Hindu
   10. Other (please specify)\_\_\_\_\_\_\_\_\_\_
4. What is your gender?
   1. Male
   2. Female
   3. Other
5. What is your primary major/ department? (If you are a student, choose the department which represents most closely your primary major. If you are faculty or staff, choose the department of your primary appointment.)
   1. (Drop down list of possibilities with “other” to write in)
6. What is your current status at CMU?
   1. 1st year undergraduate student (freshman)
   2. 2nd year (sophomore)
   3. 3rd year (junior)
   4. 4th year (senior)
   5. 5th + year
   6. Master’s Student
   7. PhD Student
   8. Post Doctoral student
   9. Faculty/teaching
   10. Staff/administration
7. What is your approximate GPA? (students only)
   1. (drop down with 2 digits)
8. Are you a US Citizen?
   1. Yes/No
9. In which US state have you spent the majority of your life?
   1. (drop down with US states, and a choice of outside the US)
10. How often have you worried about financial issues in the past year (think of tuition, housing costs, travel, etc...)?

      o            o o   o        o            o o

   Daily                                          Occasionally                                       Never

1. How often have you worried about employment issues in the past year (think of post graduate employment, job security, etc...)?

    o            o o   o        o            o o

   Daily                                          Occasionally                                   Never

Political Questions:

1. Are you eligible to vote in the US?
   1. Yes/No
2. (If you answered yes to 12) Have you previously voted in a US presidential election?
   1. Yes/No
3. (If you answered yes to 12) Who did you vote for in the 2008 presidential election?
   1. Abstained from voting
   2. Barack Obama
   3. John McCain
   4. Ralph Nader
   5. Other\_\_\_\_\_\_\_\_
4. What political party do you most strongly associate with?
   1. Democrat
   2. Republican
   3. Independent
   4. Green Party
   5. Other\_\_\_\_\_\_\_\_
5. Where on the following scale would you place your political preferences?

        o            o o   o        o            o o

   Strong             Moderate              Weak

  central- government central-government

1. How much do your religious views impact your everyday life?

       o            o o   o        o            o o

  Not at                    Moderate                   Very

     all                much

1. Where on the following scale would you place your economic views?

      o            o o   o        o            o    o

   Very           Moderate  Very

pro-government regulation pro-unregulated private

1. Where on the following scale would you place your views on social issues (such as abortion, gay marriage, immigration, gun control, etc)?

     o            o o   o        o            o o

       Very socially   Moderate  Very socially

 liberal  conservative

1. How much have you been following the Republican primaries?

       o o o o

Not at all A little Some A lot

(randomize order of and names contained in the following four anchoring vignettes). Answer choices are:

      o        o    o   o

Not at all   A little Some A lot

1. Tom has watched the majority of the Republican debates and actively follows election news by reading articles every day. How would you rank the amount that Tom has been following the Republican primaries?
2. Betty reads articles about the candidates about once a week, knows the major issues, and has watched one or two of the Republican debates. How would you rank the amount that Betty has been following the Republican primaries?
3. Bob knows the candidates’ names, and has heard a little bit about the issues, but hasn’t watched any debates and does not keep up to date with the political news. How would you rank the amount that Bob has been following the Republican primaries?
4. Susy doesn’t know who’s running for the Republican party or what the major issues are. How would you rank the amount that Susy has been following the Republican primaries?
5. List the candidates who are currently in the running for Republican nomination.
   1. open answer
6. Rank the following candidates in the order you would vote for them in the 2012 presidential elections if given the chance: If you are not planning on voting, do not rank any.(order randomized for each survey)
   1. Barack Obama
   2. Rick Santorum
   3. Mitt Romney
   4. Newt Gingrich
   5. Ron Paul
   6. Other\_\_\_\_\_\_
7. How effective do you feel the US Public K-12 Education System is at preparing students to attend college and enter the workforce?

      o            o    o     o        o            o  o               o

    Not           Very Moderately     Very

   Sure      Ineffective   Effective                      Effective

1. How do you feel about the state of alternative energy research (e.g. solar, wind, geothermal, biofuel)?

       o          o        o       o   o        o            o o

Not Sure       Poor                                      Adequate                               Excellent

1. How representative of the average person do you think the interests of Congress are?

          o    o o   o        o            o    o

    Not Very               Moderately             Very

Representative         Representative                  Representative

1. How would you rank the importance of each of the following issues on a scale from 1 to 10 with 10 being the most important. If you do not feel an issue is important, mark it as 0. (order randomized in survey)
   1. Abortion/ contraception policy
   2. Health care policy
   3. Same-sex marriage
   4. War in the Middle East
   5. Immigration policy
   6. Web Censorship policy
   7. Education Reform
   8. Separation of church and state
   9. Military Spending
   10. Alternative energy research
   11. Environmental policy
   12. Drug law (decriminalizing or legalizing marijuana)
   13. Employment/Unemployment issues
   14. Foreign Policy
   15. Government spending/ National Debt
   16. Scientific/ Technical Research

**B Contact Letters**

Original Email Request

Hello (First Name) ,

We're students in 36-303 (Sampling, Surveys, and Society) and we’re conducting a brief survey about politics and the CMU community. You have been randomly selected from the CMU community to take our survey. We’d really appreciate your response and it will only take a few minutes. Your responses will be kept confidential and will not be linked to your name. You can access the survey at: <https://www.surveymonkey.com/s/CMUCommunityPolitics> Thank you again for your time and consideration.

At the start of the survey, please enter your ID Number. This information is not linked to your name and only is used to track responses to the survey. If you have any questions please contact us by replying to this email or email our Professor, Brian Junker, at brian@stat.cmu.edu

Your ID # is: (ID number)

Sincerely,

Dev Doshi, Emily Gehrels, Will Weiner, Crystal Wray and Pavan Yalamanchili

Recontact Email

Dear (Student),

We recently sent you an invitation to participate in a brief survey for 36-303 (Sampling, Surveys, and Society).  We would really appreciate if you could take a few minutes to respond. You can access the survey at: <https://www.surveymonkey.com/s/CMUCommunityPolitics> Thank you again for your time and consideration.

At the start of the survey, please enter your ID Number. This information is not linked to your name and only is used to track responses to the survey. If you have any questions please contact us by replying to this email or email our Professor, Brian Junker, at brian@stat.cmu.edu

Your ID # is: (ID number)

Sincerely,

Dev Doshi, Emily Gehrels, Will Weiner, Crystal Wray, and Pavan Yalamanchili

**C Informed Consent Statement**

Thank you for taking our survey! This should only take a few minutes and will provide valuable information about the political makeup of CMU in this election year.

Participation in this survey is voluntary and you may quit at any time.

**D Gory Statistical Analysis**

Will be complete once we have more information