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**Effects of Voter Outreach Programs on Immigrants based on Gender: Experimental Evidence from France**

**Section I: Introduction**

Women constitute a little more than half of the world’s population. However, this does not represent their participation within social and economic decisions within the society (Bari, 2005). In 2005, global representation of women within legislatures was only 15% (Bari, 2005). Now, these aspects of female participation have become measures of economic development. In 1997, South Asian countries had gender related development index (GDI) lower than the human development index with the gender empowerment measure (GEM) being among the lowest in the world (Mahbub ul Haq 2001).

While there are typical measures of female participation within elections or in the labor market, I have chosen to look at an undervalued yet important indicator of female participation which is voting. I first replicate the study of Vincent Pons and Guillaume Liegey’s paper “Increasing the Electoral Participation of Immigrants: Experimental Evidence from France.” I then extend this randomized control trial (RCT) through heterogeneity analysis by separating the effects of the treatment program by gender. I hypothesize that the effect of the outreach program will be greater for women than men, with the program allowing women to feel important in their participation within the election process. The women are immigrants from the Middle East, Africa and Asia where there has existed significant gender bias in terms of female participation in social, economic and political issues.

The rest of the paper is structured as follows. Section II is the literature review, establishing gender bias within the immigrant countries of my sample population. Section III a. discusses the data and descriptive statistics where I replicate the host paper’s statistics, and Section III b. discusses the descriptive statistics and balance table for my heterogeneity analysis. The results of the main paper are replicated in Section IV. The research method for my analysis is established in Section V where I also outline my results and robustness checks. Finally, section VI concludes.

**Section II: Literature Review**

Evidence of gender bias can be seen in developed countries indicated by voting preference. A psychological study examined the effects of the influence of gender, ethnicity and other control variables on gender bias in actual elections (Flannelly 2002). Kevin J. Flannelly randomly selected 404 voters in Hawaii to inquire about candidate preference in local elections. He found the average likelihood of voting for female candidates to be 38.2%. Older men were also less likely to vote for the female candidate as compared to older women.

Certain developmental studies attempt to address this. A paper exploits random variation from an exposure program towards female leaders in the West Bengal of India and uses survey and experimental data to look at the causal impact of the program on the election as well as the perception of people towards female leaders (Beaman; Chattopadhyay; Duflo; Pande and Topalova, 2009). They have found that villagers in India prefer male leaders and have prior negative bias towards female leaders, even if they were identical to male counterparts. Through various rounds of their exposure programs the authors find evidence that voters still preferred male leaders, but the information on women as effective leaders increased female access to the political office.

Another study examines gender quotas in Lesotho, Southern Africa as a way of addressing gender bias (Clayton, 2018). Such quotas are designed to fight bias by changing explicit preferences for males as leaders, informing about women as competent political candidates and altering implicit biases towards the role of females in society. The author finds that the quota had weakly increased favors towards female candidates within young women but no other demographic groups.

With a great deal of observations for the immigrant population coming from Africa, I look at a study conducted within Rwanda. In this paper, Erin Stern, Lori Heise and Lyndsay McLean explores the norms of men as the decision-making authorities in the household. They analyzed data gathered from interviews of 24 total focus group discussions for a thought experiment establishing gender norms within Rwanda. They find an overwhelming view that it is a man’s responsibility to provide economically for the family and provide for household needs. Women were expected to contribute income towards domestic chores and child caring, and not provide economic advice. Majority of the study participants agreed that men are the heads of the households and have decision making authority over their wives. Such a norm might extend to female political opinions and consequently, their voting behavior.

As a direct relation to my research question, one paper acknowledges women in many democracies, have a lower probability of voting than men and might follow the interests of the male household head when they do (Mansuri and Mine 2018). Women in such democracies have a high reporting rate of voting in preference to a household head or caste. The authors deem this due to factors such as tradition and cultural barriers, husbands forcing political beliefs on wives to maintain household bargaining power and lack of information regarding political participation. They implement an informational voter outreach program, like the program within my host paper for the 2008 national elections in Pakistan. Their 1,018-household study yielded an average increase in voting odds for females by 44 percent significant at the 1% level when accounting for spillover effects by controlling for household distance between treated women. They further used official election results to look at actual female voting results as well as turnout data for men. For 10 women targeted by the campaign almost 7 turned up to vote. There was no impact on male turnouts which could reflect them already having greater information on politics or a lack of communication between males and females regarding politics, nullifying the spillover effects between gender types.

Finally, it is important to establish the persistence of program effects in subsequent years, since I estimate this in my analysis. The paper I am replicating has summarized this well, citing studies that have found overreaching effects up to 8 years after the time of intervention (Liegey and Pons 2018). A study by Coppock and Green in 2016 found that overreaching effects are more apparent for elections with low importance and if approached by similar elections later in time. The 2010 regionals have low stakes compared to the presidential elections and the 2011 cantonal elections are like the regionals. Therefore, the authors of my replication estimate effects for the 2011 elections, and I do so too.

**Section III a: Replication Data and Statistics**

I use the data compiled by Vincent Pons and Guillaume Liegey in the paper that I will replicate. This data is a combination of voter rolls, canvasser reports, voter turnout results, post-electoral survey, map data regarding distance between people’s home and polling station aggregated using census data. Table 1 below is a replication from the original paper. It presents descriptive statistics on observable characteristics. I include a column for difference in means between treatment and control groups and associated p-values for the null hypothesis that these differences are not different from each other. As shown in Table 1, almost all variables have p values well above the 10% significant levels. This implies that we must accept the null hypothesis that the difference in means of variables within the treatment and control groups are not significantly different. There are only three mean differences significant at the 5% level which are professional qualification (degreebepcap), executives (spc\_id3) and other inactivity (spc\_id3) with p-values of 0.042, 0.028 and 0.026 respectively.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Var** | **c\_mean** | **c\_sd** | **tr\_mean** | **tr\_sd** | **Diff** | **P val** | **n** |
| *Panel (a) Building Characteristics* | | | | | | | |
| cityind1 | 0.056 | 0.23 | 0.046 | 0.21 | -0.01 | 0.668 | 23773 |
| cityind2 | 0.098 | 0.297 | 0.104 | 0.306 | 0.006 | 0.788 | 23773 |
| cityind3 | 0.049 | 0.216 | 0.049 | 0.216 | 0 | 0.978 | 23773 |
| cityind4 | 0.116 | 0.32 | 0.118 | 0.322 | 0.002 | 0.96 | 23773 |
| cityind5 | 0.169 | 0.375 | 0.162 | 0.369 | -0.007 | 0.865 | 23773 |
| cityind6 | 0.065 | 0.247 | 0.061 | 0.24 | -0.004 | 0.81 | 23773 |
| cityind7 | 0.3 | 0.458 | 0.315 | 0.465 | 0.015 | 0.699 | 23773 |
| cityind8 | 0.146 | 0.353 | 0.144 | 0.351 | -0.003 | 0.933 | 23773 |
| zus | 0.344 | 0.475 | 0.354 | 0.478 | 0.01 | 0.812 | 23773 |
| pricem2 | 3446.599 | 1422.97 | 3393.678 | 1400.634 | -52.921 | 0.706 | 23773 |
| distance | 0.272 | 0.243 | 0.268 | 0.248 | -0.003 | 0.867 | 23773 |
| *Panel (b) Individual Characteristics from voter rolls* | | | | | | | |
| gender | 0.449 | 0.497 | 0.461 | 0.498 | 0.011 | 0.069 | 23773 |
| agevote | 44.173 | 17.89 | 44.22 | 17.834 | 0.047 | 0.937 | 23773 |
| origin\_imm | 0.291 | 0.454 | 0.301 | 0.459 | 0.01 | 0.476 | 23760 |
| origin\_maghreb | 0.112 | 0.316 | 0.116 | 0.32 | 0.003 | 0.683 | 23760 |
| origin\_africa | 0.085 | 0.279 | 0.087 | 0.282 | 0.001 | 0.858 | 23760 |
| origin\_asia | 0.056 | 0.231 | 0.063 | 0.243 | 0.007 | 0.387 | 23760 |
| origin\_otherorigins | 0.039 | 0.193 | 0.037 | 0.19 | -0.001 | 0.746 | 23760 |
| born\_idf | 0.52 | 0.5 | 0.504 | 0.5 | -0.017 | 0.126 | 23760 |
| *Panel (c) Individual Characteristics from post electoral survey* | | | | | | | |
| survey\_attempt | 0.154 | 0.361 | 0.163 | 0.369 | 0.008 | 0.467 | 23773 |
| surveydone | 0.242 | 0.428 | 0.232 | 0.422 | -0.011 | 0.508 | 3766 |
| nodegree | 0.144 | 0.352 | 0.137 | 0.344 | -0.007 | 0.784 | 817 |
| degreecep | 0.045 | 0.207 | 0.046 | 0.209 | 0.001 | 0.958 | 817 |
| degreebepc | 0.05 | 0.217 | 0.071 | 0.257 | 0.021 | 0.175 | 817 |
| degreebepcap | 0.227 | 0.419 | 0.17 | 0.376 | -0.057 | 0.042 | 817 |
| degreebac | 0.227 | 0.419 | 0.254 | 0.436 | 0.027 | 0.403 | 817 |
| degreebacplus2 | 0.154 | 0.361 | 0.147 | 0.355 | -0.006 | 0.8 | 817 |
| degreehigher | 0.154 | 0.361 | 0.175 | 0.381 | 0.021 | 0.437 | 817 |
| worker | 0.588 | 0.493 | 0.583 | 0.494 | -0.005 | 0.885 | 804 |
| unemploy\_worker | 0.109 | 0.312 | 0.077 | 0.266 | -0.032 | 0.126 | 804 |
| student | 0.07 | 0.256 | 0.105 | 0.307 | 0.035 | 0.076 | 804 |
| retired | 0.179 | 0.384 | 0.169 | 0.375 | -0.01 | 0.715 | 804 |
| inactiveother | 0.053 | 0.225 | 0.066 | 0.249 | 0.013 | 0.452 | 804 |
| spc\_id1 | 0.002 | 0.05 | 0.003 | 0.051 | 0 | 0.97 | 783 |
| spc\_id2 | 0.032 | 0.177 | 0.018 | 0.134 | -0.014 | 0.2 | 783 |
| spc\_id3 | 0.07 | 0.255 | 0.113 | 0.317 | 0.043 | 0.028 | 783 |
| spc\_id4 | 0.251 | 0.434 | 0.207 | 0.406 | -0.044 | 0.147 | 783 |
| spc\_id5 | 0.291 | 0.455 | 0.262 | 0.441 | -0.029 | 0.383 | 783 |
| spc\_id6 | 0.065 | 0.246 | 0.063 | 0.243 | -0.002 | 0.926 | 783 |
| spc\_id7 | 0.184 | 0.388 | 0.173 | 0.379 | -0.011 | 0.709 | 783 |
| spc\_id8 | 0.104 | 0.306 | 0.16 | 0.367 | 0.056 | 0.026 | 783 |

**Table 1** *(replication)*

**Section III b: Extension Statistics**

I now illustrate descriptive statistics for my sample size which focuses on just immigrants within the treatment and control groups using the same variables in Table 1. Table 2 below is a balance table showcasing a t-test on the means. In Table 1, we can see that gender has a p-value of 0.069 which implies that there is a skewed distribution for gender within the treatment and control groups for the whole sample population. However, in Table 2 we can see that the distribution of gender has improved across the two immigrant wings with a p-value of 0.228. This implies that the gender distribution is now more similar within the treatment and control groups. Like Table 1, the average values have been reported along with the number of observations. The SD shows the spread of the variables in the table.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Var** | **c\_mean** | **c\_sd** | **tr\_mean** | **tr\_sd** | **P val** | **n** |
| *Panel (a) Building Characteristics* | | | | | | |
| cityind1 | 0.027 | 0.162 | 0.024 | 0.152 | 0.807 | 4747 |
| cityind2 | 0.092 | 0.289 | 0.091 | 0.288 | 0.982 | 4747 |
| cityind3 | 0.028 | 0.164 | 0.022 | 0.148 | 0.524 | 4747 |
| cityind4 | 0.08 | 0.271 | 0.067 | 0.251 | 0.624 | 4747 |
| cityind5 | 0.108 | 0.31 | 0.102 | 0.302 | 0.87 | 4747 |
| cityind6 | 0.082 | 0.275 | 0.065 | 0.247 | 0.424 | 4747 |
| cityind7 | 0.412 | 0.492 | 0.459 | 0.498 | 0.36 | 4747 |
| cityind8 | 0.171 | 0.377 | 0.17 | 0.375 | 0.964 | 4747 |
| zus | 0.463 | 0.499 | 0.507 | 0.5 | 0.377 | 4747 |
| pricem2 | 3031.076 | 1203.809 | 2960.577 | 1194.133 | 0.564 | 4747 |
| distance | 0.271 | 0.262 | 0.257 | 0.25 | 0.56 | 4747 |
| *Panel (b) Individual Characteristics from voter rolls* | | | | | | |
| gender | 0.5 | 0.5 | 0.515 | 0.5 | 0.228 | 4747 |
| agevote | 48.882 | 14.223 | 48.208 | 14.913 | 0.272 | 4747 |
| origin\_maghreb | 0.432 | 0.495 | 0.43 | 0.495 | 0.949 | 4747 |
| origin\_africa | 0.329 | 0.47 | 0.324 | 0.468 | 0.831 | 4747 |
| origin\_asia | 0.216 | 0.412 | 0.227 | 0.419 | 0.638 | 4747 |
| origin\_otherorigins | 0.027 | 0.162 | 0.023 | 0.151 | 0.564 | 4747 |
| *Panel (c) Individual Characteristics from post electoral survey* | | | | | | |
| survey\_attempt | 0.157 | 0.364 | 0.167 | 0.373 | 0.501 | 4747 |
| surveydone | 0.295 | 0.457 | 0.265 | 0.442 | 0.351 | 769 |
| nodegree | 0.221 | 0.417 | 0.181 | 0.387 | 0.495 | 198 |
| degreecep | 0.029 | 0.168 | 0.011 | 0.103 | 0.353 | 198 |
| degreebepc | 0.077 | 0.268 | 0.064 | 0.246 | 0.715 | 198 |
| degreebepcap | 0.115 | 0.321 | 0.138 | 0.347 | 0.63 | 198 |
| degreebac | 0.279 | 0.451 | 0.277 | 0.45 | 0.973 | 198 |
| degreebacplus2 | 0.144 | 0.353 | 0.181 | 0.387 | 0.487 | 198 |
| degreehigher | 0.135 | 0.343 | 0.149 | 0.358 | 0.764 | 198 |
| worker | 0.622 | 0.487 | 0.641 | 0.482 | 0.787 | 190 |
| unemploy\_worker | 0.163 | 0.372 | 0.087 | 0.283 | 0.124 | 190 |
| student | 0.041 | 0.199 | 0.13 | 0.339 | 0.023 | 190 |
| retired | 0.102 | 0.304 | 0.076 | 0.267 | 0.526 | 190 |
| inactiveother | 0.071 | 0.259 | 0.065 | 0.248 | 0.862 | 190 |
| spc\_id2 | 0.043 | 0.204 | 0.023 | 0.15 | 0.44 | 181 |
| spc\_id3 | 0.054 | 0.227 | 0.091 | 0.289 | 0.317 | 181 |
| spc\_id4 | 0.258 | 0.44 | 0.182 | 0.388 | 0.23 | 181 |
| spc\_id5 | 0.366 | 0.484 | 0.295 | 0.459 | 0.332 | 181 |
| spc\_id6 | 0.065 | 0.247 | 0.136 | 0.345 | 0.096 | 181 |
| spc\_id7 | 0.108 | 0.311 | 0.08 | 0.272 | 0.514 | 181 |
| spc\_id8 | 0.108 | 0.311 | 0.193 | 0.397 | 0.096 | 181 |

**Table 2: Balance Table for Immigrant**

**Section IV:**

The authors estimate the impact of visits by conducting an IV regression. Their treatment variable is defined as 1 if canvassers had visited the building to provide outreach information and 0 otherwise. This is then instrumented with the original assignment to treatment within the estimating equations. The main sources of the difference occurred, due to a few buildings in the control group being treated by mistake and some buildings in the treatment group not being covered due to time constraints. Therefore, the authors feel that the groups still comply with randomization. I do not formally check for this, which is why I will show ITT, TOT and the Local Average Treatment Effect (LATE) by using the same instrument strategy as the authors.

*Section IV.1: Total Effect*

The authors first estimate the overall impact of the visits before dividing it up into the immigrant and non-immigrant population. The LATE results for this can be seen in panel (a) of Table 3 below. The average treatment effect (ATE) variable is “actualtreat.” We can see the impact of the visits has a positive effect across all rounds on the average with and without the individual building controls. However, we can see that these results are not statistically significant.

*Section IV.2: Effect on Immigrants*

The authors then separate the effects of the program by immigrant population. This can be seen in panel (b) of Table 3 below. They interact the treatment groups with whether the individual is an immigrant which codes “immigrant” as 1. The variable of interest is “immigrant.actualtreat” which interacts immigrant origin with being treated and shows the differential impact of the program on immigrants. Now, we can see there is a significant increase of voting participation for immigrants as compared to non-immigrants. If we look at columns 5 and 6 which looks at the average of the first and second rounds, we can see that there was an increase in participation by immigrants of 3.7 and 4 percentage points respectively for without and with building and individual controls respectively. These are significant at the 5 % level. The differential impact of the program for non-immigrants, however, was negative and insignificant from 0 which can be seen in the values of the “actualtreat” row of panel (b). Columns 5 and 6 show these values to be -0.6 and -0.9 percentage points respectively.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| VARIABLES | vote2010\_1st | vote2010\_1st | vote2010\_2nd | vote2010\_2nd | vote2010\_av | vote2010\_av |
| *Panel (a) : Overall* | First Round | | Second Round | | Average of Both Rounds | |
| actualtreat | 0.004 | 0.003 | 0.006 | 0.003 | 0.005 | 0.003 |
|  | (0.008) | (0.008) | (0.008) | (0.008) | (0.007) | (0.007) |
| Constant | -0.004 | -0.418\*\*\* | 0.494\*\*\* | 0.054 | 0.245\*\*\* | -0.182\*\*\* |
|  | (0.008) | (0.060) | (0.008) | (0.062) | (0.007) | (0.057) |
|  |  |  |  |  |  |  |
| Observations | 23,773 | 23,760 | 23,773 | 23,760 | 23,773 | 23,760 |
| R-squared | 0.060 | 0.099 | 0.054 | 0.098 | 0.064 | 0.113 |
| control mean | 0.342 | 0.342 | 0.378 | 0.378 | 0.360 | 0.360 |
| *Panel (b): Immigrant Effects* |  |  |  |  |  |  |
| actualtreat | -0.008 | -0.011 | -0.005 | -0.008 | -0.006 | -0.009 |
|  | (0.009) | (0.009) | (0.010) | (0.009) | (0.009) | (0.008) |
| immigrant.actualtreat | 0.041\*\* | 0.044\*\*\* | 0.032\* | 0.036\*\* | 0.037\*\* | 0.040\*\* |
|  | (0.017) | (0.017) | (0.019) | (0.018) | (0.017) | (0.016) |
| immigrant | 0.003 | -0.010 | 0.017 | 0.002 | 0.010 | -0.004 |
|  | (0.011) | (0.012) | (0.012) | (0.012) | (0.011) | (0.011) |
| Constant | 0.008 | -0.408\*\*\* | 0.505\*\*\* | 0.060 | 0.256\*\*\* | -0.174\*\*\* |
|  | (0.009) | (0.060) | (0.010) | (0.062) | (0.009) | (0.057) |
|  |  |  |  |  |  |  |
| Observations | 23,760 | 23,760 | 23,760 | 23,760 | 23,760 | 23,760 |
| R-squared | 0.061 | 0.100 | 0.056 | 0.099 | 0.065 | 0.114 |
| control mean | 0.354 | 0.354 | 0.385 | 0.385 | 0.369 | 0.369 |

**Table 3: Impact of Visits in 2010 Regionals**

*Section IV.3: Controlling for Origin Region and Born Abroad vs their Children:*

The authors now differentiate between different groups of the immigrant population to see if this changes the magnitude of the coefficients. In panel (a) of Table 4 below they look at immigrants born abroad versus their children. They use the voter roll data to identify children based on individuals 15 years or younger living within the same household. Looking at the values of “immigrant.actualtreat” and “immigrants' child.actualtreat” we can see that there are positive values across the first, second and average of the rounds. The impact on immigrants born abroad separated from the children are 5.7, 3.6 percentage points respectively in columns 1 and 2 in Table 4. This is respective to the first and second rounds. The first-round effect was significant at the 1% level while the second round was significant at the 10% level. This averages a 1% significant 4.6 percentage point effect for the average of both rounds in column 3 of Table 4.

Next, the authors control for the regions of the immigrants which can be seen in panel (b) of Table 4 below. Here the “actualtreat” variable has been interacted with the regions of Maghreb, Sub-Saharan Africa, Asia and other places of origin[[1]](#footnote-1). We can see that these interaction variables in panel (b) all have positive signs, consistent with the overall effect on immigrants. But due to this separation causing the frequencies of the individual regions to fall, statistical significance has decreased. However, we still see a strong effect for Maghreb at 6.4, 5.6 and 6 percentage points in columns 1, 2 and 3 respectively, which are all significant at the 5 % level.

|  |  |  |  |
| --- | --- | --- | --- |
|  | (1) | (2) | (3) |
| VARIABLES | vote2010\_1st | vote2010\_2nd | vote2010\_av |
| *Panel (a) Immigrant v. Children* | First Round | Second Round | Average |
| actualtreat | -0.011 | -0.008 | -0.009 |
|  | (0.009) | (0.009) | (0.008) |
| immigrant.actualtreat | 0.057\*\*\* | 0.036\* | 0.046\*\*\* |
|  | (0.018) | (0.019) | (0.017) |
| immigrants' child.actualtreat | 0.007 | 0.037 | 0.022 |
|  | (0.031) | (0.034) | (0.030) |
| immigrant | -0.028\*\* | -0.007 | -0.018 |
|  | (0.014) | (0.013) | (0.012) |
| immigrants’child | 0.033\* | 0.023 | 0.028 |
|  | (0.020) | (0.021) | (0.019) |
| Constant | -0.418\*\*\* | 0.051 | -0.183\*\*\* |
|  | (0.060) | (0.062) | (0.057) |
|  |  |  |  |
| Observations | 23,760 | 23,760 | 23,760 |
| R-squared | 0.100 | 0.099 | 0.114 |
| control mean | 0.354 | 0.385 | 0.369 |
| *Panel (b) Immigrant origins* |  |  |  |
| actualtreat | -0.012 | -0.009 | -0.010 |
|  | (0.009) | (0.009) | (0.008) |
| maghreb.actualtreat | 0.064\*\* | 0.056\*\* | 0.060\*\* |
|  | (0.025) | (0.027) | (0.024) |
| africa.actualtreat | 0.045 | 0.044 | 0.045\* |
|  | (0.029) | (0.029) | (0.027) |
| asia.actualtreat | 0.036 | 0.018 | 0.027 |
|  | (0.036) | (0.035) | (0.033) |
| other.actualtreat | 0.020 | 0.008 | 0.014 |
|  | (0.044) | (0.047) | (0.042) |
| maghreb | -0.039\*\* | -0.019 | -0.029\* |
|  | (0.016) | (0.017) | (0.015) |
| africa | 0.046\*\* | 0.040\*\* | 0.043\*\* |
|  | (0.020) | (0.019) | (0.018) |
| asia | -0.030 | -0.001 | -0.015 |
|  | (0.026) | (0.025) | (0.024) |
| other | -0.023 | -0.021 | -0.022 |
|  | (0.026) | (0.029) | (0.026) |
| Constant | -0.395\*\*\* | 0.071 | -0.162\*\*\* |
|  | (0.061) | (0.063) | (0.059) |
|  |  |  |  |
| Observations | 23,760 | 23,760 | 23,760 |
| R-squared | 0.102 | 0.100 | 0.115 |
| control mean | 0.354 | 0.385 | 0.369 |

**Table 4: Impact for Different Immigrant Groups in 2010 Regionals**

*Section IV.4: Effect Persistence*

The authors now move on to test whether the outreach program has a longer-term effect rather than just an immediate effect to the 2010 regional elections. Using individual turnout data, the authors gathered participation values for the 2011 cantonal elections spanning four cities in France. Table 5 below, replicates the analysis done in Table 3 but now with 2011 election data. Panel (a) shows the overall effect of the treatment. We can see that the effect of the treatment is generally positive across all columns and specifications except for column 4 for the second round with the individual and building controls at – 0.1 percentage points. However, these effects are not significant. Once immigrants have been separated in panel (b) there are consistent positive effects in the “immigrant.actualtreat” variable showing that even in the 2011 elections there has been a generally larger increase for immigrants as compared to nonimmigrants. However, these values are no longer significant at any level. The authors explain that this implies that the mobilization of the program has decayed overtime although it still exhibits a positive impact.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
| VARIABLES | vote2011\_1st | vote2011\_1st | vote2011\_2nd | vote2011\_2nd | vote2011\_av | vote2011\_av |
| *Panel (a): Overall* | First Round | | Second Round | | Average of Both Rounds | |
| actualtreat | 0.004 | 0.003 | 0.001 | -0.001 | 0.003 | 0.001 |
|  | (0.009) | (0.009) | (0.009) | (0.009) | (0.009) | (0.008) |
| Constant | 0.496\*\*\* | 0.054 | 0.499\*\*\* | 0.093 | 0.497\*\*\* | 0.073 |
|  | (0.009) | (0.095) | (0.009) | (0.082) | (0.009) | (0.082) |
|  |  |  |  |  |  |  |
| Observations | 15,416 | 15,405 | 15,410 | 15,399 | 15,410 | 15,399 |
| R-squared | 0.057 | 0.109 | 0.051 | 0.098 | 0.057 | 0.118 |
| control mean | 0.262 | 0.262 | 0.291 | 0.291 | 0.277 | 0.277 |
| *Panel (b): Immigrant Impact* |  |  |  |  |  |  |
| actualtreat | -0.003 | -0.004 | -0.010 | -0.011 | -0.006 | -0.007 |
|  | (0.012) | (0.012) | (0.012) | (0.011) | (0.011) | (0.010) |
| immigrant.actualtreat | 0.019 | 0.020 | 0.028 | 0.029 | 0.024 | 0.025 |
|  | (0.021) | (0.020) | (0.021) | (0.021) | (0.019) | (0.019) |
| immigrant | -0.012 | -0.016 | 0.020 | 0.015 | 0.004 | -0.000 |
|  | (0.014) | (0.014) | (0.014) | (0.015) | (0.013) | (0.013) |
| Constant | 0.503\*\*\* | 0.062 | 0.510\*\*\* | 0.098 | 0.506\*\*\* | 0.080 |
|  | (0.012) | (0.094) | (0.012) | (0.082) | (0.011) | (0.082) |
|  |  |  |  |  |  |  |
| Observations | 15,405 | 15,405 | 15,399 | 15,399 | 15,399 | 15,399 |
| R-squared | 0.057 | 0.109 | 0.052 | 0.099 | 0.058 | 0.119 |
| control mean | 0.274 | 0.274 | 0.293 | 0.293 | 0.283 | 0.283 |

**Table 5: Impact of Visits on 2011 Cantonals**

*Section IV.5: Isolating Influence of Immigrant Origin on Treatment Effect*

The authors now try to investigate whether being an immigrant was the only determinant factor of the estimated effects of the outreach program, to see if there are other characteristics within the immigrant population that could explain the high statistical significance of ATE. The authors recreate the balance table seen in Table 1 but now compares economic characteristics between immigrants and non-immigrants. By analyzing these characteristics, the authors can understand if the results of the program only had to do with the fact that the individuals were immigrants. This analysis can be seen in Table 6 below where p-values of the difference in characteristics are reported to see if the immigrant population exhibits any significant differences from the nonimmigrant population. Each panel exhibits a different set of characteristics. Once these variables have been found, they are controlled for in Table 7.

The ATE estimate which is variable “immigrant.actualtreat” continue to be positive, with significance ranging from the 5% to 1% level across all specifications in Table 7. The ATE value stays mostly consistent ranging from 4.1 to 4.5 percentage points from columns 1 to 7 for the first round in panel (a). For column 8, where all controls are added, the authors find a 4-percentage point greater impact for immigrants as compared to non-immigrants significant at the 5% level. This differential impact decreases a little to the range of a 3.6 percentage point increase for the second round in panel (b). It continues to be positive but loses some statistical power. In column 8 the second round showcases an ATE of 3.4 percentage points significant at the 10% level.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Variables** | **Non-Immigrants** | | **Immigrants** | | **p** | **N** |
|  | Mean | Sd | Mean | Sd |  |  |
| *Panel (a): Building Characteristics* | | | | | | |
| zus | 0.296 | 0.456 | 0.476 | 0.499 | 0 | 23760 |
| pricem2 | 3594.491 | 1456.008 | 3010.206 | 1207.826 | 0 | 23760 |
| distance | 0.273 | 0.243 | 0.263 | 0.25 | 0.188 | 23760 |
| *Panel (b): Individual Characteristics (voter rolls, whole sample)* | | | | | | |
| gender | 0.437 | 0.496 | 0.497 | 0.5 | 0 | 23760 |
| agevote | 44.433 | 18.347 | 43.593 | 16.615 | 0.001 | 23760 |
| born\_idf | 0.634 | 0.482 | 0.222 | 0.416 | 0 | 23760 |
| *Panel (c): Individual Characteristics (post-electoral survey)* | | | | | | |
| nodegree | 0.116 | 0.32 | 0.194 | 0.396 | 0.003 | 816 |
| degreecep | 0.052 | 0.223 | 0.027 | 0.161 | 0.093 | 816 |
| degreebepc | 0.058 | 0.234 | 0.065 | 0.246 | 0.703 | 816 |
| degreebepcap | 0.224 | 0.417 | 0.148 | 0.356 | 0.011 | 816 |
| degreebac | 0.228 | 0.42 | 0.266 | 0.443 | 0.231 | 816 |
| degreebacplus2 | 0.154 | 0.361 | 0.144 | 0.352 | 0.731 | 816 |
| degreehigher | 0.168 | 0.374 | 0.156 | 0.363 | 0.658 | 816 |
| worker | 0.575 | 0.495 | 0.612 | 0.488 | 0.322 | 803 |
| unemploy\_worker | 0.086 | 0.28 | 0.11 | 0.313 | 0.275 | 803 |
| student | 0.075 | 0.263 | 0.114 | 0.318 | 0.068 | 803 |
| retired | 0.212 | 0.409 | 0.09 | 0.287 | 0 | 803 |
| inactiveother | 0.053 | 0.224 | 0.075 | 0.263 | 0.229 | 803 |
| spc\_id1 | 0.004 | 0.061 | 0 | 0 | 0.339 | 782 |
| spc\_id2 | 0.02 | 0.142 | 0.037 | 0.188 | 0.181 | 782 |
| spc\_id3 | 0.099 | 0.299 | 0.073 | 0.261 | 0.254 | 782 |
| spc\_id4 | 0.238 | 0.426 | 0.212 | 0.41 | 0.421 | 782 |
| spc\_id5 | 0.263 | 0.44 | 0.31 | 0.464 | 0.167 | 782 |
| spc\_id6 | 0.05 | 0.219 | 0.094 | 0.292 | 0.02 | 782 |
| spc\_id7 | 0.216 | 0.412 | 0.094 | 0.292 | 0 | 782 |
| spc\_id8 | 0.11 | 0.313 | 0.18 | 0.385 | 0.007 | 782 |
| *Panel (d): Knowledgeability and Partisanship* | | | | | | |
| Q1\_registered\_s | 0.845 | 0.363 | 0.796 | 0.404 | 0.196 | 456 |
| Q7\_knows\_pres\_s | 0.517 | 0.501 | 0.443 | 0.499 | 0.148 | 440 |
| Q8\_knows\_budget\_s | 0.332 | 0.472 | 0.281 | 0.451 | 0.278 | 440 |
| Info\_index | 0 | 0.708 | -0.132 | 0.71 | 0.062 | 458 |
| list1\_ps | 0.459 | 0.501 | 0.5 | 0.506 | 0.662 | 127 |
| list2\_ps | 0.727 | 0.448 | 0.9 | 0.304 | 0.024 | 139 |

**Table 6: Differences between Characteristics of Immigrants and Nonimmigrants**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| VAR | None | Gender | Age | Born in France | Based in a ZUS | Housing Price | Distance to Polling Station | All |
| *Panel (a): First Round* | | | | | | | | |
| immigrant.actualtreat | 0.044\*\*\* | 0.043\*\* | 0.044\*\*\* | 0.042\*\* | 0.041\*\* | 0.045\*\*\* | 0.044\*\* | 0.040\*\* |
|  | (0.017) | (0.017) | (0.017) | (0.019) | (0.017) | (0.017) | (0.017) | (0.019) |
| Constant | -0.408\*\*\* | -0.407\*\*\* | -0.406\*\*\* | -0.412\*\*\* | -0.415\*\*\* | -0.404\*\*\* | -0.415\*\*\* | -0.408\*\*\* |
|  | (0.060) | (0.060) | (0.061) | (0.061) | (0.060) | (0.060) | (0.060) | (0.062) |
|  |  |  |  |  |  |  |  |  |
| Observations | 23,760 | 23,760 | 23,760 | 23,760 | 23,760 | 23,760 | 23,760 | 23,760 |
| R-squared | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 |
| *Panel (b): Second Round* | | | | | | | | |
| immigrant.actualtreat | 0.036\*\* | 0.034\* | 0.036\*\* | 0.035\* | 0.035\* | 0.038\*\* | 0.036\*\* | 0.034\* |
|  | (0.018) | (0.018) | (0.018) | (0.020) | (0.018) | (0.019) | (0.018) | (0.020) |
| Constant | 0.060 | 0.063 | 0.061 | 0.058 | 0.058 | 0.067 | 0.060 | 0.072 |
|  | (0.062) | (0.062) | (0.063) | (0.063) | (0.062) | (0.063) | (0.062) | (0.064) |
|  |  |  |  |  |  |  |  |  |
| Observations | 23,760 | 23,760 | 23,760 | 23,760 | 23,760 | 23,760 | 23,760 | 23,760 |
| R-squared | 0.099 | 0.099 | 0.099 | 0.099 | 0.099 | 0.099 | 0.099 | 0.099 |

**Table 7: Impact of Visits for 2010 Regionals, Allowing for Heterogeneity**

**Section V: Extension Analysis**

Now I will conduct my extension analysis and separate the effects based on gender. First, I will discuss the econometric specification I use and then move on to discussing my results and robustness checks.

*Section V.1: Econometric Specification*

I use the following equation to separate the effects of the treatment for immigrants by their gender:

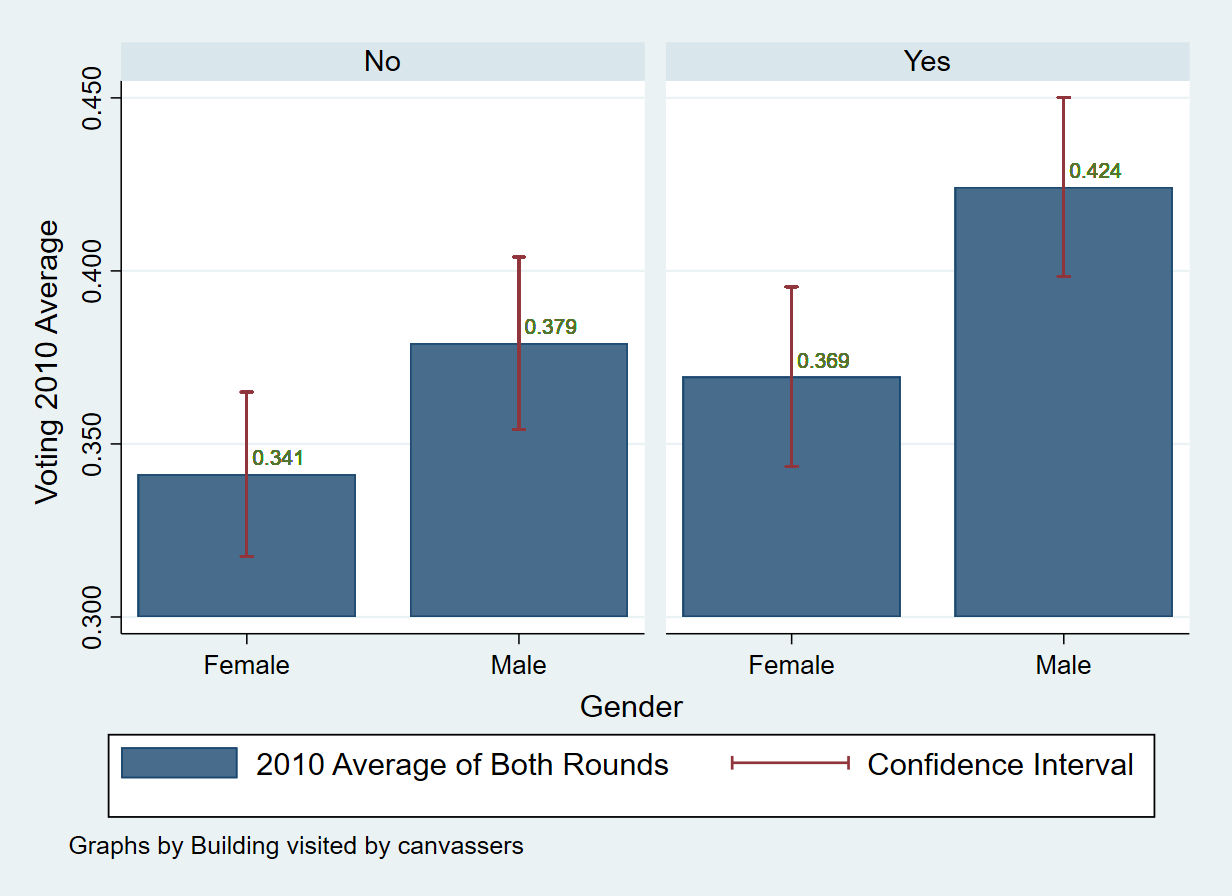
*Yi,b = α1 + β1Tb + β2genderi,b + β3(genderi,b . Tb) + X’bϒ1 + Z’i,b δ1 +* Σ*sλsb + ϵi,b*

Here, *Yi,b* is the turnout of individual *i* who resides in building *b*. *Tb* is coded as 1 if a building *b* has received treatment. This variable will change for the three types of estimation I will do which I will further explain below. The variable *genderi,b* is coded as 1 for males and coded as 0 for females. *X’b* is a vector of building characteristics (ZUS, housing price and distance to polling station) while *Z’i,b* is individual controls (age and age2). Finally, *λsb* are strata fixed effects. Here, *β2* is the differential impact of males in the control group. *β1* is the impact of the treatment for women and *β1* + *β3* would therefore be the impact of treatment for men. The average treatment effect is *β3* which estimates the differential impact of the treatment for males compared with females. Finally, *ϵi,b* is the error term.

As mentioned above, I will perform ITT, TOT and LATE estimates for my analysis. The equation stays the same for all three estimation techniques except for the variable *Tb* . For ITT *Tb* is the original assignment to the treatment group that the authors intended for the program. For TOT, *Tb* changes to the actual buildings which got the treatment which is different from the original assignment for reasons I had mentioned previously. Finally, the LATE estimate performs a two stage least squares regression where it uses the actual treatment as an explanatory variable and instruments it with the original assignment. In this case of LATE, *Tb*is the predicted value of the actual treatment from the first stage of regressing it using the original assignment. All standard errors have been clustered at the building level.

*Section V.2: General Visualization*

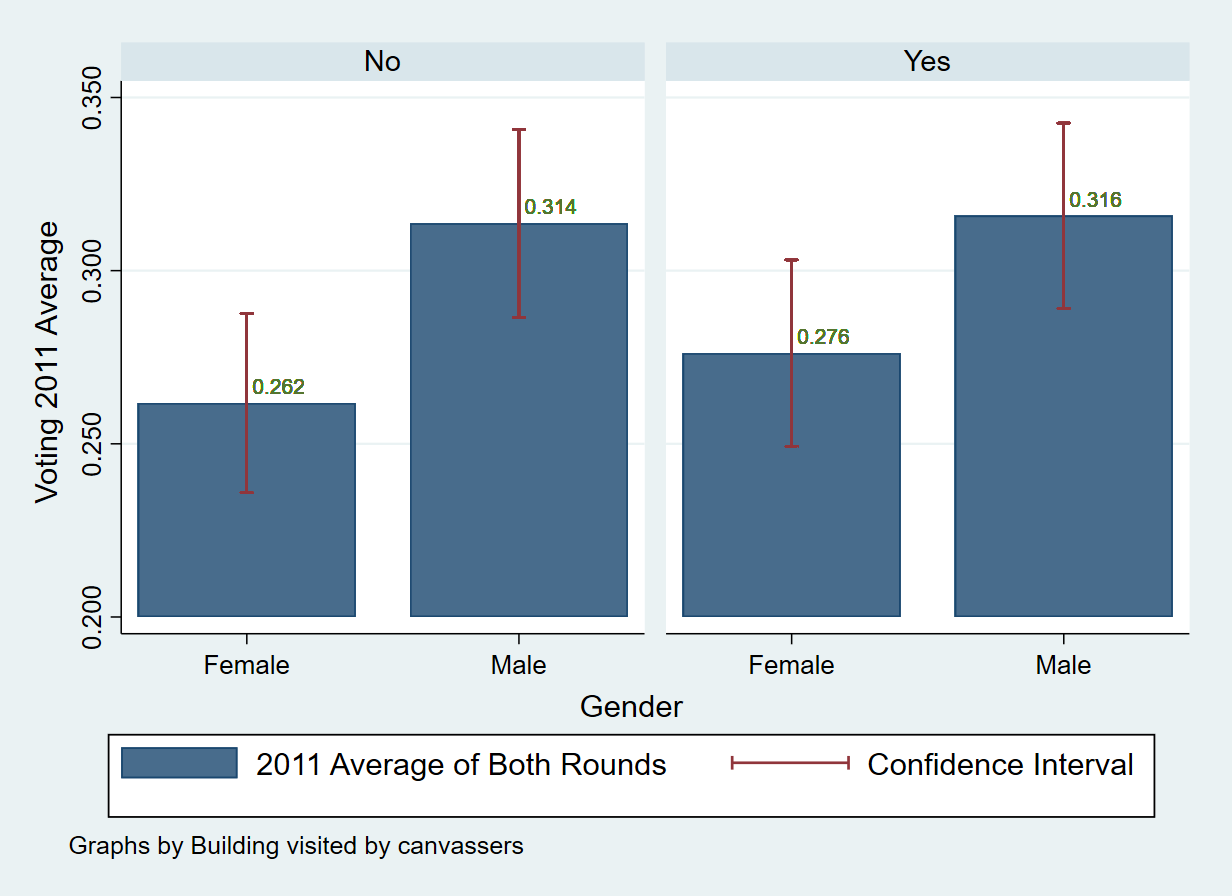
Before moving forward with the regression results, I look at a bar graph of the mean voter turnout for the average of both rounds in the election for the treatment and control groups based on gender. This allows me to expect what the direction of the treatment effect might be from the regression result. Figure 1 below illustrates this for the 2010 regional elections.



**Fig 1: Voter Turnout for the Average of Rounds in 2010**

We can see that there has been increasing impacts for both males and females, consistent with the success of the program. Males have increased from 37.9 percentage points to 42.4 percentage points while women have seen an increase from 34.1 percentage points to 36.9 percentage points for voter turnout. Men have had a greater differential effect which would be reflected within the average treatment effect variables of the regressions as a positive coefficient. The true effect can be estimated once strata fixed effects and individual and building controls have been accounted for.

Since I will also test the persistence of the program, figure 2 below illustrates the turnout for the 2011 cantonal elections.



**Fig 2: Voter Turnout for the Average of Rounds in 2011**

In this figure we can see that women seem to have a greater differential impact as compared to men with a 1.4 percentage point increase for them, while men only have a 0.2 percentage point increase. Therefore, now I would expect the average treatment effect to have a negative coefficient signifying that women have felt a greater outreaching effect of the program as compared to men.

*Section V.3: ITT Results*

Table 8 below looks at the regression results for the 2010 regional elections separated by gender. Panel (a) looks at the first round, panel (b) illustrates the second round and panel (c) is the average results of both rounds. The second column includes only strata fixed effects while the third column includes strata fixed effects, individual controls and building controls. This format will hold for all regression tables within these main results. The variable “male.assigntreat”, reflects the ATE, in all three panels within all tables in this ITT section. . Looking at the first column we can see positive ATE values, which implies that the differential impact of increased voting participation was greater for men at 2.4, 2.2 and 2.3 percentage points for the three panels respectively. While this goes against my alternate hypothesis that the differential impact would be greater for women showcased by a negative sign, the impact is not significantly different from zero. When strata fixed effects are included in column 2, the coefficients become smaller in both rounds averaging an effect of 1.9 percentage points in panel (c) of column 2 as compared to the 2.3 percentage point difference in column 1 of the same panel. Including individual and building controls further reduces this coefficient to an average effect of 1.5 percentage points in column 3.

Since I hypothesize that the outreach program would cause a behavioral change in female immigrants, it could be possible that the effects of the program might be felt in a longer term rather than immediate elections. Therefore, I redo the analysis for the 2011 cantonal elections as shown in Table 9. In the first round we continue to see positive ATE values across all specifications of controls. However, in the second round which is the furthest from the time of treatment now sees a negative value for ATE implying that women had a greater increase in voting participation as compared to men. This effect was 1.8, 1.2 and 1.5 percentage points from columns 1 to 3. This effect was large enough to create an overall negative average ATE at 0.8 percentage points for all controls. While this is the hypothesized sign I expected, it is not significant from 0.

|  |  |  |  |
| --- | --- | --- | --- |
|  | (1) | (2) | (3) |
| VARIABLES | vote2010\_1st | vote2010\_1st | vote2010\_1st |
| Panel (a): First rounds in 2010 regional | | | |
| male.assigntreat | 0.024 | 0.021 | 0.018 |
|  | (0.024) | (0.024) | (0.024) |
| male | 0.037\*\* | 0.048\*\*\* | 0.040\*\* |
|  | (0.016) | (0.016) | (0.016) |
| assigntreat | 0.025 | 0.016 | 0.022 |
|  | (0.021) | (0.019) | (0.018) |
| Constant | 0.315\*\*\* | -0.048\*\*\* | 0.366\*\* |
|  | (0.014) | (0.016) | (0.182) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
| Observations | 4,747 | 4,747 | 4,747 |
| R-squared | 0.004 | 0.096 | 0.114 |
|  |  |  |  |
|  | vote2010\_2nd | vote2010\_2nd | vote2010\_2nd |
| Panel (b): Second rounds in 2010 regional | | | |
| male.assigntreat | 0.022 | 0.016 | 0.012 |
|  | (0.024) | (0.024) | (0.024) |
| male | 0.034\*\* | 0.041\*\* | 0.031\* |
|  | (0.017) | (0.017) | (0.017) |
| assigntreat | 0.007 | 0.005 | 0.014 |
|  | (0.021) | (0.019) | (0.019) |
| Constant | 0.379\*\*\* | -0.041\*\* | 0.065 |
|  | (0.014) | (0.017) | (0.183) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
| Observations | 4,747 | 4,747 | 4,747 |
| R-squared | 0.003 | 0.088 | 0.116 |
|  |  |  |  |
|  | vote2010\_av | vote2010\_av | vote2010\_av |
| Panel (c): Average of both rounds in 2010 regional | | | |
| male.assigntreat | 0.023 | 0.019 | 0.015 |
|  | (0.021) | (0.022) | (0.021) |
| male | 0.035\*\* | 0.044\*\*\* | 0.035\*\* |
|  | (0.015) | (0.015) | (0.015) |
| assigntreat | 0.016 | 0.010 | 0.018 |
|  | (0.019) | (0.017) | (0.017) |
| Constant | 0.347\*\*\* | -0.044\*\*\* | 0.215 |
|  | (0.012) | (0.015) | (0.169) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
| Observations | 4,747 | 4,747 | 4,747 |
| R-squared | 0.004 | 0.093 | 0.121 |

**Table 8: ITT Estimates for 2010 Regionals**

|  |  |  |  |
| --- | --- | --- | --- |
|  | (1) | (2) | (3) |
| VARIABLES | vote2011\_1st | vote2011\_1st | vote2011\_1st |
| Panel (a): First rounds in 2011 cantonal | | | |
| male.assigntreat | 0.005 | 0.002 | 0.000 |
|  | (0.026) | (0.027) | (0.026) |
| male | 0.046\*\* | 0.054\*\*\* | 0.043\*\* |
|  | (0.018) | (0.019) | (0.018) |
| assigntreat | 0.008 | 0.009 | 0.013 |
|  | (0.022) | (0.021) | (0.021) |
| Constant | 0.235\*\*\* | 0.000 | 0.276 |
|  | (0.016) | (.) | (0.184) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | YES | YES |
| Observations | 3,579 | 3,579 | 3,579 |
| R-squared | 0.003 | 0.087 | 0.117 |
|  |  |  |  |
|  | vote2011\_2nd | vote2011\_2nd | vote2011\_2nd |
| Panel (b): Second rounds in 2011 cantonal | | | |
| male.assigntreat | -0.018 | -0.012 | -0.015 |
|  | (0.028) | (0.029) | (0.029) |
| male | 0.053\*\*\* | 0.053\*\*\* | 0.043\*\* |
|  | (0.019) | (0.019) | (0.019) |
| assigntreat | 0.007 | 0.007 | 0.013 |
|  | (0.023) | (0.022) | (0.022) |
| Constant | 0.295\*\*\* | 1.000 | -0.079 |
|  | (0.016) | (.) | (0.203) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | YES | YES |
| Observations | 3,578 | 3,578 | 3,578 |
| R-squared | 0.002 | 0.074 | 0.105 |
|  |  |  |  |
|  | vote2011\_av | vote2011\_av | vote2011\_av |
| Panel (c): Average of both rounds in 2011 cantonal | | | |
| male.assigntreat | -0.006 | -0.005 | -0.008 |
|  | (0.024) | (0.025) | (0.024) |
| male | 0.049\*\*\* | 0.053\*\*\* | 0.043\*\*\* |
|  | (0.017) | (0.017) | (0.016) |
| assigntreat | 0.008 | 0.008 | 0.013 |
|  | (0.020) | (0.019) | (0.019) |
| Constant | 0.265\*\*\* | 0.500\*\*\* | 0.099 |
|  | (0.015) | (0.000) | (0.175) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
| Observations | 3,578 | 3,578 | 3,578 |
| R-squared | 0.003 | 0.079 | 0.116 |

**Table 9: ITT Estimates for 2011 Cantonals**

*Section V.4: TOT Results*

Since the actual treatment was different from how the authors originally assigned it there is likely to be some bias in the ITT estimates. Therefore, I show regression results for TOT using the actual treatment assignment. Now, the ATE variable is “male.actualtreat.” Table 10 below does this for the 2010 regional elections. In comparison with the estimates from Table 8 there are not any significant differences in the magnitude of estimates. They continue to be positive and insignificant from 0. Looking at the average effects, men have a greater impact of the program at 1.7, 1.9 and 1.7 percentage points across the control specifications.

The TOT estimate with the 2011 election data is shown in Table 11 below. Looking at panel (a) we can see a change in sign from the previous ITT estimates of panel (a) of Table 9. The coefficients illustrating ATE are now all negative implying women having a greater differential impact compared to men. This impact is now 0.4, 0.5 and 0.6 percentage points across specifications in the first round. In the second round we continue to see negative coefficients 2.1, 1.4 and 1.7 percentage points more for women than men in the three columns respectively. This increases the average impact in panel (c). Panel (c) of Table 9 had a negative average value of 0.8 percentage points in column 3 which includes all controls. Now this negative value increases to 1.1 percentage points in the TOT estimate. Since the TOT reflects the actual treatment, I would place more weight on these estimates in comparison with the ITT. However, none of the ATE’s reported are statistically significant.

|  |  |  |  |
| --- | --- | --- | --- |
|  | (1) | (2) | (3) |
| VARIABLES | vote2010\_1st | vote2010\_1st | vote2010\_1st |
| Panel (a): First rounds in 2010 regional | | | |
| male.actualtreat | 0.016 | 0.020 | 0.019 |
|  | (0.024) | (0.024) | (0.024) |
| male | 0.041\*\* | 0.048\*\*\* | 0.040\*\* |
|  | (0.016) | (0.016) | (0.016) |
| actualtreat | 0.036\* | 0.025 | 0.030 |
|  | (0.021) | (0.019) | (0.019) |
| Constant | 0.310\*\*\* | -0.048\*\*\* | 0.355\*\* |
|  | (0.014) | (0.016) | (0.181) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
| Observations | 4,747 | 4,747 | 4,747 |
| R-squared | 0.005 | 0.096 | 0.114 |
|  |  |  |  |
|  | vote2010\_2nd | vote2010\_2nd | vote2010\_2nd |
| Panel (b): Second rounds in 2010 regional | | | |
| male.actualtreat | 0.018 | 0.018 | 0.015 |
|  | (0.024) | (0.025) | (0.024) |
| male | 0.035\*\* | 0.040\*\* | 0.030\* |
|  | (0.017) | (0.017) | (0.017) |
| actualtreat | 0.021 | 0.019 | 0.026 |
|  | (0.021) | (0.020) | (0.019) |
| Constant | 0.372\*\*\* | -0.040\*\* | 0.049 |
|  | (0.013) | (0.017) | (0.181) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
| Observations | 4,747 | 4,747 | 4,747 |
| R-squared | 0.003 | 0.088 | 0.116 |
|  |  |  |  |
|  | vote2010\_av | vote2010\_av | vote2010\_av |
| Panel (c): Average of both rounds in 2010 regional | | | |
| male.actualtreat | 0.017 | 0.019 | 0.017 |
|  | (0.021) | (0.022) | (0.021) |
| male | 0.038\*\* | 0.044\*\*\* | 0.035\*\* |
|  | (0.015) | (0.015) | (0.015) |
| actualtreat | 0.028 | 0.022 | 0.028 |
|  | (0.019) | (0.018) | (0.017) |
| Constant | 0.341\*\*\* | -0.044\*\*\* | 0.202 |
|  | (0.012) | (0.015) | (0.168) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
| Observations | 4,747 | 4,747 | 4,747 |
| R-squared | 0.005 | 0.094 | 0.121 |

**Table 10: TOT Estimates for 2010 Regionals**

|  |  |  |  |
| --- | --- | --- | --- |
|  | (1) | (2) | (3) |
| VARIABLES | vote2011\_1st | vote2011\_1st | vote2011\_1st |
| Panel (a): First rounds in 2011 cantonal | | | |
| male.actualtreat | -0.004 | -0.005 | -0.006 |
|  | (0.026) | (0.027) | (0.027) |
| male | 0.050\*\*\* | 0.057\*\*\* | 0.046\*\* |
|  | (0.018) | (0.018) | (0.018) |
| actualtreat | 0.020 | 0.024 | 0.026 |
|  | (0.022) | (0.021) | (0.021) |
| Constant | 0.230\*\*\* | 0.976\*\*\* | 0.257 |
|  | (0.015) | (0.021) | (0.183) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
| Observations | 3,579 | 3,579 | 3,579 |
| R-squared | 0.003 | 0.087 | 0.118 |
|  |  |  |  |
|  | vote2011\_2nd | vote2011\_2nd | vote2011\_2nd |
| Panel (b): Second rounds in 2011 cantonal | | | |
| male.actualtreat | -0.021 | -0.014 | -0.017 |
|  | (0.028) | (0.029) | (0.029) |
| male | 0.054\*\*\* | 0.053\*\*\* | 0.043\*\* |
|  | (0.019) | (0.019) | (0.019) |
| actualtreat | 0.009 | 0.016 | 0.021 |
|  | (0.023) | (0.022) | (0.022) |
| Constant | 0.294\*\*\* | 1.000\*\*\* | -0.090 |
|  | (0.016) | (0.000) | (0.204) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
| Observations | 3,578 | 3,578 | 3,578 |
| R-squared | 0.002 | 0.074 | 0.105 |
|  |  |  |  |
|  | vote2011\_av | vote2011\_av | vote2011\_av |
| Panel (c): Average of both rounds in 2011 cantonal | | | |
| male.actualtreat | -0.012 | -0.009 | -0.011 |
|  | (0.024) | (0.025) | (0.024) |
| male | 0.052\*\*\* | 0.055\*\*\* | 0.044\*\*\* |
|  | (0.016) | (0.016) | (0.016) |
| actualtreat | 0.014 | 0.020 | 0.023 |
|  | (0.020) | (0.019) | (0.019) |
| Constant | 0.262\*\*\* | 0.500\*\*\* | 0.084 |
|  | (0.014) | (0.000) | (0.175) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
| Observations | 3,578 | 3,578 | 3,578 |
| R-squared | 0.003 | 0.079 | 0.116 |

**Table 11: TOT Estimates for 2011 Cantonals**

*Section V.5: LATE Results*

Finally, we now look at results from the instrument variable regression. Due to the nature of the differences between the original assignment to treatment and actual treatment, it is likely that randomization still holds in which case the TOT estimates would not likely be biased. Yet, the LATE estimates illustrate a conservative approach. Table 12 below does this for the 2010 regional elections. The ATE is “male.actualtreat” which is the fitted values from the first stage regression. There continues to be positive ATE’s across all rounds and specifications as seen before in the ITT and TOT estimate tables. For the average of the rounds the differential impact for men is greater at 1.9 percentage points for strata fixed effects and individual and building controls. This is only slightly greater than the previous TOT estimate by 0.2 percentage points. We continue to see insignificant coefficients for the ATE in Table 12.

Table 13 below shows the LATE estimates for the 2011 elections. We can see that in panel (a) the ATE becomes positive signifying that men have a greater differential impact. However, this is an extremely low value which is 0 percentage points when all controls are added. The second round now looks at a negative sign favoring the differential impact for women. We see a 2, 1.3 and 1.7 percentage point increase for women across all specifications in Table 13. Finally, this leads to an average effect of negative 0.8 percentage points in column 3 of panel (c). Therefore, we can see that the TOT estimates and the LATE estimates for 2011 is consistent with my theory of women having a greater impact than men while the analysis for the 2010 elections yields an opposite result as seen by the positive signs. However, none of the ATE’s I have estimated are significant from 0.

|  |  |  |  |
| --- | --- | --- | --- |
|  | (1) | (2) | (3) |
| VARIABLES | vote2010\_1st | vote2010\_1st | vote2010\_1st |
| Panel (a): First rounds in 2010 regional | | | |
| actualtreat | 0.028 | 0.016 | 0.023 |
|  | (0.023) | (0.020) | (0.019) |
| male.actualtreat | 0.025 | 0.023 | 0.020 |
|  | (0.026) | (0.026) | (0.025) |
| male | 0.036\*\* | 0.047\*\*\* | 0.039\*\* |
|  | (0.017) | (0.016) | (0.016) |
| Constant | 0.314\*\*\* | 0.346\*\*\* | -0.240 |
|  | (0.015) | (0.010) | (0.170) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
| Observations | 4,747 | 4,747 | 4,747 |
| R-squared | 0.005 | 0.096 | 0.114 |
|  |  |  |  |
|  | vote2010\_2nd | vote2010\_2nd | vote2010\_2nd |
| Panel (b): Second rounds in 2010 regional | | | |
| actualtreat | 0.007 | 0.005 | 0.015 |
|  | (0.023) | (0.020) | (0.020) |
| male.actualtreat | 0.024 | 0.018 | 0.013 |
|  | (0.026) | (0.026) | (0.026) |
| male | 0.033\* | 0.040\*\* | 0.031\* |
|  | (0.017) | (0.017) | (0.017) |
| Constant | 0.378\*\*\* | 0.350\*\*\* | -0.518\*\*\* |
|  | (0.014) | (0.011) | (0.171) |
|  |  |  |  |
| Observations | 4,747 | 4,747 | 4,747 |
| R-squared | 0.003 | 0.088 | 0.116 |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
|  | vote2010\_av | vote2010\_av | vote2010\_av |
| Panel (c): Average of both rounds in 2010 regional | | | |
| actualtreat | 0.017 | 0.010 | 0.019 |
|  | (0.021) | (0.018) | (0.018) |
| male.actualtreat | 0.024 | 0.020 | 0.017 |
|  | (0.023) | (0.023) | (0.023) |
| male | 0.035\*\* | 0.044\*\*\* | 0.035\*\* |
|  | (0.015) | (0.015) | (0.015) |
| Constant | 0.346\*\*\* | 0.348\*\*\* | -0.379\*\* |
|  | (0.013) | (0.009) | (0.158) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
| Observations | 4,747 | 4,747 | 4,747 |
| R-squared | 0.005 | 0.094 | 0.121 |

**Table 12: LATE Estimates for 2010 Regionals**

|  |  |  |  |
| --- | --- | --- | --- |
|  | (1) | (2) | (3) |
| VARIABLES | vote2011\_1st | vote2011\_1st | vote2011\_1st |
| Panel (a): First rounds in 2011 cantonal | | | |
| actualtreat | 0.008 | 0.009 | 0.014 |
|  | (0.025) | (0.022) | (0.022) |
| male.actualtreat | 0.005 | 0.002 | 0.000 |
|  | (0.029) | (0.029) | (0.028) |
| male | 0.046\*\* | 0.054\*\*\* | 0.043\*\* |
|  | (0.019) | (0.019) | (0.018) |
| Constant | 0.235\*\*\* | 0.111 | -0.549\*\*\* |
|  | (0.016) | (0.077) | (0.184) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
| Observations | 3,579 | 3,579 | 3,579 |
| R-squared | 0.003 | 0.087 | 0.117 |
|  |  |  |  |
|  | vote2011\_2nd | vote2011\_2nd | vote2011\_2nd |
| Panel (b): Second rounds in 2011 cantonal | | | |
| actualtreat | 0.008 | 0.007 | 0.014 |
|  | (0.026) | (0.023) | (0.023) |
| male.actualtreat | -0.020 | -0.013 | -0.017 |
|  | (0.030) | (0.031) | (0.030) |
| male | 0.053\*\*\* | 0.053\*\*\* | 0.043\*\* |
|  | (0.019) | (0.019) | (0.019) |
| Constant | 0.294\*\*\* | 0.067 | -0.596\*\*\* |
|  | (0.017) | (0.063) | (0.179) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
| Observations | 3,578 | 3,578 | 3,578 |
| R-squared | 0.002 | 0.074 | 0.105 |
|  |  |  |  |
|  | vote2011\_av | vote2011\_av | vote2011\_av |
| Panel (c): Average of both rounds in 2011 cantonal | | | |
| actualtreat | 0.008 | 0.008 | 0.014 |
|  | (0.023) | (0.020) | (0.020) |
| male.actualtreat | -0.007 | -0.005 | -0.008 |
|  | (0.026) | (0.026) | (0.026) |
| male | 0.050\*\*\* | 0.054\*\*\* | 0.043\*\*\* |
|  | (0.017) | (0.017) | (0.016) |
| Constant | 0.265\*\*\* | 0.089 | -0.572\*\*\* |
|  | (0.015) | (0.066) | (0.172) |
| Strata Controls | NO | YES | YES |
| Build/Ind Controls | NO | NO | YES |
| Observations | 3,578 | 3,578 | 3,578 |
| R-squared | 0.003 | 0.079 | 0.116 |

**Table 13: LATE Estimate for 2011 Cantonals**

*Section V.6: LATE Robustness Check*

In order to check for the sensitivity of my regression results, I exclude the Middle Eastern population and redo my LATE estimation on the average of rounds in both the 2010 and 2011 elections. While I believe that the Middle East displays characteristics of gender bias like Asia and Africa, I was not able to find papers that carefully test this claim. I do this for the average of both rounds to see the mean final effect and I use LATE since it is the most conservative estimation approach. Table 14 below illustrates these results. We can see the ATE variable to continue having positive effects for the 2010 elections. This effect is 2.1 percentage points and 1.6 percentage points more for men than women, without and with individual and building controls respectively. However, we can see that the previously negative average treatment effect for the 2011 elections as seen in panel (c) of Table 13 has become more positive. Without individual and building controls there is now a 0.2 percentage point increase for men and with all controls the effect is 0. However, the average treatment effects remain insignificant from zero.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| VARIABLES | vote2010\_av | vote2010\_av | vote2011\_av | vote2011\_av |
|  |  |  |  |  |
| male.actualtreat | 0.021 | 0.016 | 0.002 | -0.000 |
|  | (0.023) | (0.023) | (0.026) | (0.026) |
| actualtreat | 0.013 | 0.022 | 0.009 | 0.014 |
|  | (0.018) | (0.018) | (0.020) | (0.020) |
| male | 0.047\*\*\* | 0.038\*\* | 0.052\*\*\* | 0.041\*\* |
|  | (0.015) | (0.015) | (0.017) | (0.017) |
| Constant | 0.346\*\*\* | -0.403\*\* | 0.088 | -0.564\*\*\* |
|  | (0.009) | (0.162) | (0.066) | (0.185) |
| Strata Controls | YES | YES | YES | YES |
| Build/Ind Controls | NO | YES | NO | YES |
| Observations | 4,636 | 4,636 | 3,497 | 3,497 |
| R-squared | 0.095 | 0.122 | 0.079 | 0.116 |

**Table 14: LATE excluding Middle East**

**Section VI: Conclusion**

In this paper I have replicated the study of the effects of a voter outreach program implemented in France during the 2010 on immigrants and extended the estimates by gender. I have found that for the 2010 regional elections there has been a positive differential impact for men as compared to women across all estimation techniques and specifications, robust to the exclusion of the Middle Eastern population. However, these effects were not significant. When I looked at the persistence effect of this in the 2011, cantonal elections the effect was negative, signifying a greater impact for women compared to men of the program. The average of the rounds yielded this effect across all estimations and specifications however this was insignificant, and the negative magnitude fell when the Middle Eastern population was excluded.

One possible explanation of this change in direction of effect across elections could be that since there is a psychological effect of the program which made women feel more important in this decision, it took some time for this effect to manifest, causing the negative effects to be seen in the 2011 elections rather than the 2010 elections. But since I did not find any significance within my results, this is not a substantiated claim. The insignificance of these results corresponds to the same results the authors had found for the 2011 elections, where they state that the program seemed to have a diminishing overreaching effect.

In order to estimate a true causal effect of treating gender bias norms, we would need a program that is designed to do that. This program was not specified towards isolating the presence of female exclusion within household decision making and future research projects can devise a program which can answer that claim, like the study in Pakistan by Gine and Mansuri in 2018. Once this ideal program has been established, the research design I have implemented will be able to evaluate the effect of the program on voter turnout during the presence of gender bias.

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1. As discussed above: Maghreb, Sub-Saharan Africa and Asia have the greatest number of immigrant observations while other regions such as Middle East or South America for example have a lower number of observations. Therefore, the authors have composed these regions into the category of “other”. [↑](#footnote-ref-1)