

# Phase 3 Report

This first question we set out to explore was whether or not incumbents, members of the house of commons who are running for re-election, have a higher chance of winning their local elections. If so, what factors could lead to the rarer case of the incumbent being defeated. We quickly confirmed that incumbents are much safer in elections than those who challenge them. Across the 39th-43rd federal elections, incumbents lost their seats on average 25% of the time, meaning they kept their seats 75% of the time ('Q1\_Query\_1'). However, it is important to note that this figure does not include incumbents who chose not to run for re-election, which may have a significant impact on the result. What particularly stood out in these results is the large variation in the value between elections. Three of the five elections, 39th, 40th, 43rd, had values between 10 and 20 percent. Conversely, the 42nd election saw 51% of incumbents lose their races, with the 41st falling in between with 32% ('Q1\_Query\_2', 'Q1\_Query\_3'). To determine what caused so many to fail their re-election attempts in 2015 we looked at the overall results for each election. We found that before the 42nd election, the Liberals held only 34 seats, in this election they then captured 184 at the expense of the Conservatives and NDP ('Q1\_Query\_4'). This leads us to the conclusion that, while incumbents are generally safe, large swings in feelings towards their parties can counter their advantage.

Next we examine the impact of donations on election results. First there is the matter of the impact of donations at a local level on each election, where we are concerned with each individual riding. We examined the contributions made directly to the candidates. Our findings show that approximately 71.08% of the winning candidates from each riding had received greater than the average donation amount for that riding in each election. This was done using the 'Q2\_Query\_1' result in the demo. It is a relatively significant amount, which implies a small positive influence of donation amounts on candidates winning elections. It is not overwhelmingly in the favour of high donation amounts, especially since around 30% of candidates won without having a donation amount over average, so it is possible that high donation amounts may not necessarily lead to a better campaign, as it is still the candidate that must decide what to do with the money.

We then decided to see how many of the candidates who won their ridings had the maximum amount of donations out of all the other candidates in their riding. It turns out the percentage of winners who had the maximum amount of donations was not too far off from the amount of winning candidates who had above average donations - it was in fact 69.88% of the total winners. This was done using the 'Q2\_Query\_2' result in the demo. This seems to indicate a polarizing difference in donations between those who won, as either winners received the maximum amount of donations or they received a below average amount of donations.

Having seen the results on a local level, we wanted to see how widespread the impact of donations was and turned to the federal level election results. Now, we actually find that the results as expected are much less nuanced as there are less overall party winners (since there can only be one per election). Nevertheless, we found that the winning party had the maximum donations out of all the parties 100% (from 'Q2\_Query\_3') of the time, which demonstrates that the overall impact of political donations to parties cumulatively leads to a victory for the party with the most political donations. We can contrast the number we received with that of the local results possibly by drawing connections to the collective as opposed to the individual, which may have led to overall political campaigns being run more effectively by the collective party than campaigns by individual politicians.

Finally, we chose to investigate whether the leaders of large parties have any advantage in their local races. This was primarily driven by the desire to validate our anecdotal experience that party leaders typically win their seats even when their parties lose the election overall or their riding is located in an area which is typically associated with being a stronghold for the other party. It is important to note that since there are only a handful major parties in each election and as we are only looking at five past elections our sample size for this section is rather small. However, this allows us to dive more deeply into each specific case. We found that 80% of the time, the leaders of major parties won their ridings which confirmed our suspicions that they generally perform well in local races ('Q3\_Query\_1'). Following this we wanted to determine who it was that lost and what the circumstances surrounding their loss were. In the past five elections there are four major party leaders who lost their ridings. One of them, Gilles Duceppe from the Bloc Quebecois, was defeated in both the 41st and 42nd general elections ('Q3\_Query\_2'). In both of these elections, his party performed poorly as well. This shows that while party leaders are typically likely to win a seat in the house of commons, if their party is small or their support collapses that preferred outcome may not be the case.