Electoral Cycles in Ontario Municipalities:

Does Election Proximity make Local Politicians more Competitive?

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Abstract

This research examines whether an electoral cycle is present in Ontario municipal governments and whether it causes municipal councilors to become more competitive. Through the analysis of 18 675 municipal council votes in the 2003-2006 time period, a positive correlation between time and competition was observed in three quarters of the studied municipal councils. Thus, the proximity of an election impacts the behavior of Ontario municipal councilors.

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Chapter 1 - Introduction and Review of the Literature

The common sense notion that an approaching election may cause politicians to engage in opportunistic and manipulative behavior has been investigated through a variety of means in a variety of contexts. The earliest of such work focused upon the potential for entire political decision making bodies to increase expenditure in high profile and voter friendly areas as an election approached. The electoral cycle hypothesis was then applied to the voting patterns of individual politicians: how does the proximity of an election influence how a politician votes? At both the decision making body and the individual politician level, the results of such investigations have varied depending on research design and sample. Thus, a controversy exists in the literature as to the presence and impact of the election proximity hypothesis. More recently, and specific to the Canadian and local government context, it has been found that election proximity does impact political behavior. Through the analysis of recorded votes in Ontario local governments, the objective of this paper is to address whether an electoral cycle is present and if the proximity of an election makes city councilors more competitive.

Review of the Literature

Early research on the impact of the electoral cycle on expenditure at the political decision making body level demonstrated the presence of a relationship. The most important of these early works was Edward Tufte's *Political Control of the Economy (1978).* One of Tufte's many conclusions proposed that the United States electoral cycle was impacting the increasing of social security payments and veterans' payments in election years while contributions increased in non-election years (Tufte, 1978). This opportunistic shift in expenditure allocation was further researched by Frey and Schneider in a series of three investigations in the United States, United Kingdom and West Germany (1978a, 1978b, 1979). Frey and Schneider found in all three nations that governments were prone to opportunistic expenditure increases as an election

approached. Specific to the United States: “When they are afraid of losing an election, they make an effort to influence the economy in order to increase their popularity and hence their chances of re-election.” (Frey and Schneider, 1978a, p. 183). Taking the controversy head on, Blais and Nadeau’s article entitled “The electoral budget cycle” first reviewed the literature and then analyzed the expenditures of ten Canadian provincial governments, in relation to electoral cycle, between 1951 and 1984. Through an extensive literature review, Blais and Nadeau concluded that “while this electoral cycle thesis was initially overstated by its proponents, it retains more plausibility than recent critics have allowed” (Blais and Nadeau, 1992, p. 389). Specific to Canadian provinces, Blais and Nadeau found that spending increased by 1% in election years and that social services and roads made up a substantial part of the pre-election increase. The presence of an electoral budget cycle in Canadian provinces was further confirmed by Reid (1996). On the topic of electoral cycle and the election proximity hypothesis, Blais and Nadeau leave the reader with the following warning: “One should not dismiss the common sense view that politicians’ timing of budget decisions is affected by the electoral cycle”. (Blais and Nadeau, 1992, p. 401).

Contrary to that position, a wealth of research attacking the electoral cycle-opportunistic spending relationship has been published over the last 30 years. Using new data sets, additional variables and altered methodology, the early conclusions made by Tufte and Frey and Schneider were challenged. Addressing Tufte’s transfer payment argument, Brown and Stein (1982) found that only twice do payments peak in November between 1946 and 1976. “… we provide evidence (4) that voters do not respond to the economic changes induced by politicians in a fashion predicted by the advocates of an electoral-economic link” (Brown and Stein, 1982, p. 479). Alt and Chrystal (1983) found that the results published by Frey and Schneider were not representative of an electoral cycle-opportunistic spending relationship as Gross Domestic Product had not been

included. They found that when GDP was included as an additional variable, election proximity did not have an impact on governmental expenditure (Alt and Chyrstal, 1983). More recently, Andrikopoulos, Loizides, and Prodromidis (2004) searched for the presence of a political business cycle in 14 member countries of the European Union during the time period 1970-1998. It was found that "… the empirical analysis does not lend support to the presence of electoral or partisan cycle-type hypotheses in the EU" (Andrikopoulos, Loizides, and Prodromidis, 2004, p. 146).

A different literature focuses on individual politicians and the potential for election proximity to impact how they vote. The definition of a roll call or recorded vote varies among political decision making bodies. In the United Nations: "Only a recorded vote, which must be requested before the voting is conducted, will clearly identify the stand that a Member State took on the issue under discussion." (United Nations, n.d.). In the U.S. Senate, "A roll call vote is a vote on the record, noting the name of each Senator and his/her voting position" (C-Span, n.d.). However, clear similarities exist in the above descriptions: a roll call or recorded vote is used for the purpose of identifying the position of each member of a political decision making body on a specific issue.

Thomas (1985) observed, through examining roll call votes in the United States Senate between 1959 and 1976, that the voting behaviors of individual Senators, as measured on a liberal/conservative dimension, moved to a moderate position as an election approached. Thomas also concluded that Senators not seeking reelection move away from a moderate position in their sixth year of office, most often towards a more partisan position in line with the ideology of their party.

Similarly, Amacher and Boyes (1978), Elling (1982) and Ahulja (1994) all concluded, albeit through different research methodologies, that the proximity of an election alters the manner in which an individual U.S. Senator votes. By examining the roll call voting behavior of U.S. senators from 1973-1974, economists Amacher and

Boyes (1978) concluded: “The results of an empirical test suggest that elected officials behave in a less representative fashion as the electoral period increases.” (Amacher and Boyes, 1978, p. 11). Elling (1982) investigated the roll call voting behavior of U.S. Senators from 1958 to 1978 on an ideological continuum and found “that a considerable shifting in ideological positions occurred over the course of senatorial terms and that such shifting appeared to be patterned as a function of the years remaining in a senator’s term prior to election” (Elling, 1982, p. 87). More recently, Ahuja (1994) proposed that the proximity of elections is likely to condition the behavior of politicians and determined that when U.S. Senators are up for reelection they are “very likely to exhibit voting behavior more influenced by the wishes of the electorate.” (Ahuja, 1994, p.114).

However, Wianer, Gruvaeus, and Zill (1973), Bernstein and Berkman (1988) and Hurley (1992) have found evidence that suggests election proximity may not significantly impact the voting patterns of U.S. Senators. Wianer, Gruvaeus, and Zill (1973) investigated U.S. senate roll call votes between 1964 and 1969 across eight significant political areas and concluded: “They (U.S. Senators) do vote less often, but when they show up they vote in generally similar ways as in other years.” (Wianer, Gruvaeus, and Zill, 1973, p. 17). Bernstein and Berkman (1988) called into question the methodology upon which many election proximity hypotheses were based. They found that “neither logic nor evidence supports the theory of widespread strategic moderation” (Bernstein and Berkman, 1988, 241). Lastly, Hurley (1992) through the analysis of the 1988 Senate Election Study determined that a link between election proximity and Senator decision making patterns only existed when voting on environmental issues.

However, after updating his 1988 methodology, Bernstein (1991) determined that election proximity did in fact impact the manner in which U.S. Senators voted. The question became not whether the election proximity hypothesis was to be accepted, but

rather which variables were impacting the temporal decision making shifts. Through the investigation of roll call votes, Bernstein (1991) found that as an election approached, U.S. Senators were shifting to the ideological positions of the expected competition as opposed to the previously suggested shift to a moderate position in line with constituent preferences. Ultimately, it appears that individual politicians do seek to stake out a position as an election approaches, whether through ideological moderation, increased representation of constituent opinions or the imitation of expected competition.

As seen in the above section, the measuring of roll call voting is often used to gauge changes in politician voting patterns on ideological dimensions and budgetary issues. Investigating parliament behavior in Europe, Saalfeld noted that "… recorded votes tend to be more frequent [in chambers with a less cooperative relationship] than in chambers with a more cooperative relationship between majority and minority" and that "Diachronic comparisons in Germany and Austria support the conclusion that recorded votes may be considered a function of the competitiveness between government and opposition." (Saalfled, 1995, p. 560). Thus, this 'lack of co-operation' and increased 'competitiveness' noted by Saalfeld provides a connection between the incidence of a recorded vote and political competition. The less cooperative and more competitive the political environment becomes, the greater number of recorded votes one can expect.

Literature on the impact of electoral cycle on politician decision making at the local government level is sparse, and nonexistent in the Canadian context. Through the examination of development expenditures for ten Israeli cities over the time period 1964 – 1982, Rosenberg (1992) found that local government expenditures prior to an election were greater than those post election. Thus, the existence of the election proximity hypothesis is seen at the local government level. This was further exemplified in Veiga and Veiga's (2007) "Political business cycles at the municipal level". Using the expenditures of mainland Portuguese municipalities for the time period 1979 – 2001,

Veiga and Veiga found that municipal taxes decrease prior to an election and expenditures increase (Veiga and Veiga, 2007). It was also discovered that the majority of the expenditure increase was directed into highly visible projects such as roads, streets and transportation (Veiga and Veiga, 2007). This finding runs parallel to the increase in social services and roads spending found by Blais and Nadeau in Canadian provincial expenditures.

From the wealth of studies at the political body level and those on the U.S. senate to the municipalities of Portugal and Israel, a theme arises out of the controversy: the degree to which election proximity impacts variables associated with political behavior varies given research methodology and sample. However, the most recent conclusions specific to Canada and local government indicate that the proximity of an election very likely impacts the Ontario municipal government environment.

Chapter 2 -Theory and Hypotheses

In the literature, Saafeld (1995) indentifies a positive relationship between the level of competition in a political environment and the incidence of roll call votes. It is theorized that the electoral environment makes city councilors more competitive because politicians will attempt to ensure their positions are known by the public and differentiated from other candidates. This motivation results in an increase in requests for recorded votes.

"Legislative behavior, decision making in legislatures is a key element of the functioning of democracies. Elected representatives form coalitions in order to craft legislative proposals and vote on them." (Roland, 2009, p.15). These coalitions often align along party lines as seen in the decision making and voting of the European Parliament. "Voting in the European Parliament occurs along supranational party lines and not along geographical lines." (Roland, 2009, p. 28). In the case of Canadian local government, these coalitions take on a wide variety of structures from very informal relationships based on political ideology to formal representation of political parties (Tindal and Tindal, 2004). However, in general "many of these local parties and local coalitions have lacked cohesion and not endured." (Tindal and Tindal, 2004, p. 315). Thus, it is likely that the majority of coalitions at the local government level in Canada resemble an informal relationship rooted in political ideology. Veiga and Veiga (2007) found that left-wing oriented Portuguese local politicians were more opportunistic than their right wing counterparts when it came to increasing expenditures for highly visible projects as an election approached. Blais and Nadeau (1991) also found a relationship between election proximity and provincial expenditures in Canada. It is then possible that such a relationship exists at the local level in Canada. Given the potential for political ideological coalitions and the possibility for candidates to become more opportunistic as an election approaches, we see the creation of a competitive political

environment in which councilors may attempt to differentiate themselves along partisan and/or ideological lines.

At the municipal level, it is also possible that many of the issues identified in the literature impact Ontario city council decision making with respect to an electoral cycle. Thomas (1985) and Bernstein (1991) found that U.S. Senators were shifting ideological positions as an election approached. To ensure that the public is aware of these ideological shifts, local government politicians may request additional recorded votes. Rosenberg (1992) noted that “A significant portion of (local government) incumbents fail to be re-elected …” (Rosenberg, 1992, p. 71). Because of the uncertain probability of reelection, additional pressure is on local politicians as an election approaches to ensure their position is known by the public and is well differentiated from rivals. Logically, this could also result in an increase in requests for recorded votes.

Another possible theoretical argument for the impact of an electoral cycle on the competitiveness of city councilors is the relationship between opportunistic expenditures and the ward representation structure. Similar to what Blais and Nadeau (1991) found at the Canadian provincial level and what Veiga and Veiga (2007) found at the local level in Portugal, incumbent Ontario city councilors may be motivated to increase expenditures as an election approaches. This motivational change in decision making could further progress into a form of over-zealous ward representation. It should be noted that all cities investigated in this research use a ward representation structure. City councilors could take a more competitive stance on expenditures being allocated in their home ward. Simply put, local politicians may want to draw attention to a popular and highly visible investment brought to their ward during their term; thereby differentiating themselves from fellow incumbents and potential rivals. This issue of differentiation is not limited to the example above. It is likely that councilors will want to go on the record, for the purpose of differentiation, on a variety of issues as an election approaches. The

staking out of a recorded public position by a local politician is likely a response to an increase in competition brought about by the proximity of an election.

Fundamental to the connection between position motivated councilor competition and an increase in requests for recorded votes, is a greater understanding of recorded votes and the motivations for calling one. For the purposes of this paper we will be investigating local government decision making in Ontario, Canada. Under the Ontario Municipal act: “If a member present at a meeting at the time of a vote requests immediately before or after the taking of the vote that the vote be recorded, each member present, except a member who is disqualified from voting by any Act, shall announce his or her vote openly and the clerk shall record each vote.”(Municipal Act, 2001, c. 25, s. 246 (1)).

Beyond the formal definitions of roll call and recorded vote, the motivation for instigating a recorded vote at the individual councilor level must be investigated. Through discussions with seven Ontario City Clerks, it was determined that a councilor’s motivation for instigating a recorded vote falls into two primary categories: Reputational and Symbolic. The Reputational classification is characterized by two actions: 1.) A councilor wishes to appeal to his/her supporters and therefore requests a recorded vote; 2.) A councilor wishes to distinguish themselves from an rival councilor; often along ideological lines. The later is of particular note when a rival councilor’s position would be seen as unpopular. Evidence of the reputational classification has also been addressed in the European Parliament: “Party group leaders may be motivated to embarrass other Party Groups in order to improve their own electoral fortunes. If this is the case, then the proximity of the vote to a future national or European election could influence requests for roll call votes,” (Carrubba and Gabel, 1999, p. 7). Thus, as an election approaches the potential for an increase in competition among councilors, motivated by the staking out of positions through reputational roll call vote instigation may be present.

Conflictingly, the Symbolic classification of roll call vote instigation contradicts the relationship. The Symbolic classification is characterized by the request for a roll call vote to depict the solidarity of council on a particular issue. A symbolic vote occurs when all councilors either vote ‘yea’ or ‘nay’. This is of particular interest during annual budget discussion as city councilors may be motivated to make a statement of unity on issues of financial concern. The results of the investigation into councilor motivations for calling a recorded vote, located in the methodology section, and the verbal responses from Ontario city clerks indicate that the majority of roll call votes are instigated by reputational motivations.

In conclusion, the recent research most related to the Ontario local government environment indicates the presence of an electoral cycle is very likely. The concepts of ideological polarization related to the electoral cycle; ideological jockeying given shifts in constituent interest and/or the platform of the predicted political competition; expenditure activism relative to a councilor’s home ward and the overall staking out of positions by politicians are potential responses to the competitive electoral environment. This competitive environment then motivates councilors to have their positions known to the public and differentiate themselves from other politicians. The reputational request for a recorded vote is the perfect device to achieve this goal. This then provides the opportunity to quantitatively express the level of competition in a political body as a ratio of recorded votes to total decisions made.

Hypothesis 1:

The level of competition will increase in local government councils as an election approaches.

Hypothesis 2:

The correlation between competition in local government councils and the temporal position of an election will increase when annual council budget meetings are removed.

The second Hypothesis will control the potential for annual budget cycles to impact the relationship between competition and election proximity.

Chapter 3 - Methodology

Sample

The research involved measuring the frequency of recorded votes over time. It was necessary to choose a sample that ensured all municipalities were governed under the same legislation: the Municipal Act, 2001. In addition, the sample was limited to Size Class 3 – large cities with populations ranging from 200 000 to 1 million. This population range was selected as it provides a comparable sample of Ontario cities and has been used previously in the literature to classify urban centres (Institute for Human Development, 2000). Thus, data from the following Ontario municipalities were included in the sample: Ottawa, Hamilton, Brampton, London, Markham, Vaughan, Windsor, and Kitchener. Mississauga, Ontario meets the requirements of the sample; however, because of the lack of accessible city council minutes it was omitted. The reasons for omitting data from Toronto were twofold: 1.) Toronto is governed under the New Toronto Act, 2006 not the Municipal Act, 2001; 2.) The population of Toronto exceeds 1 million. In regards to the second hypothesis, a decreased number of cities were used in the sample as only Ottawa, London and Windsor specifically identified ‘budget council minutes’.

All council minutes for the cities identified in the sample were reviewed for the time period December 2003 – December 2006. They were obtained through the website of each municipality. The number of individual meetings associated with each city for the identified time period varied greatly: from 50 in Brampton to 157 in Kitchener (Table 1). In total, 704 sets of council meetings consisting of 18 675 individual council decisions were reviewed.

Table 1 -Total municipal council meetings reviewed	
Municipality	**Council Meetings**
Ottawa	64
Brampton	50
Hamilton	82
London	66
Markham	59
Vaughan	80
Windsor	146
Kitchener	157
Total	**704**

Procedure

The time period between the 2003 municipal elections and the 2006 municipal elections was the single independent variable and was measured in terms of months. December 2003 represented month 1 and December 2006 represented month 36. Alternative time indexes were also investigated: individual council meetings prior to the election and calendar days prior to the election. Both were rejected in favour of months prior to the election because the time intervals were too short. The short time intervals resulted in a skewing of the relationship between variables because of the inclusion of special council meetings as individual data points. These special council meetings generally included less than 10 total decisions and very few recorded votes. Thus, to ensure that the special council minutes did not impact the relationship between the independent and dependent variable, time was represented in months prior to the election.

The dependent variable was represented by a ratio of ‘recorded votes’ to ‘total decisions made’, and the process by which it was calculated varied in the sample as council minute terminology differed among the cities. For each individual city, separate search algorithms were created to capture all ‘recorded votes’ and ‘decisions made’. These algorithms were based upon specific words associated with the decision making process and recorded votes. Depending on the available format of the minutes, the

search terms were then entered into the advanced search function of Adobe Acrobat or the ‘HighlightAll’ add-on search function of Mozilla Firefox. The search was then double checked for validity to ensure that the word was appearing in a context associated with a ‘recorded vote’. This double check was completed by reading the text around the identified word and making a manual note if the term was used in a decision making context. In most cases, this double check was preformed quite easily given the format of the council minutes and the numbering of council decisions. All council decisions, including recorded votes, were pulled out of the primary text of the discussion and assigned a numeric code; these two elements of council minute structure indicated if each incidence of the terms associated with recorded votes were to be included or excluded from the research. In addition to a validity double check, a word incidence double check was also completed specific to the recorded vote terminology of each municipality. For example, the sum of the incidence of the word ‘Yeas’, not the total votes, should be equal to the sum of the incidence of the word ‘Nays’ in any given set of council minutes. This is due to the manner in which all reviewed council minutes were structured. Each time a recorded vote is called, all ‘Yeas and Nays’ are listed beneath headings of the same name. This includes situations in which zero ‘Yeas or Nays’ occur. The following outlines the specific words selected for the search algorithm associated with each municipality.

The total number of decisions made in the City of Ottawa was calculated by summing the incidence of the words ‘carried’ and ‘lost’ in each set of council minutes, given the above parameters. Total ‘recorded votes’ were then calculated using the total incidence of the word ‘Yeas’ which was double checked against the total incidence of the word ‘Nays’. However, the manner in which Ottawa city council voted on their budget did prove challenging to report. On average, 50 recorded decisions are made at an Ottawa city council meeting; conversely, upwards of 250 recorded decisions are made when the

budget is tabled. This made the validity double check considerably more cumbersome and difficult to calculate in the case of budget council minutes.

'Total decisions made' for the City of Brampton was calculated in the same manner as Ottawa. Because of the format and terminology used in the Brampton minutes, 'recorded votes' was calculated using the term 'opposed' and then double checked using the term 'in favour'.

Hamilton differed from Ottawa and Brampton as the total decisions made was calculated using the following two words: 'carried' and 'defeated'. 'Recorded votes' was then calculated using the word 'Yea' which was then double checked against the incidence of the word 'Nay'. It should be noted that the format of Hamilton's minutes makes it possible to double count the incidence of the word 'Nay'; thus, making the validity check essential. Additionally, the very low incidence of the word 'defeated', only 21 cases over 81 council meetings, led to further analysis to ensure the correct variable was being measured. After thoroughly checking 20 sets of Hamilton council minutes spread throughout the three year sample for the presence of terms such as lost, failed, or unsuccessful, it was determined that 'defeated' was in fact the correct search term.

Total decisions made for the City of London and the Town of Markham were calculated by summing the incidence of 'carried' and 'lost' in the respective council minutes. London and Markham also used the same terminology when identifying 'recorded votes'. 'Yeas' were used for the initial recorded vote count and double checked using 'Nays".

Similar to London and Markham, the City of Kitchener used 'carried' and 'lost' to denote the result of council decisions. However, for the purpose of a 'recorded vote', councilor positions were identified using 'in favour' and 'contra'. Therefore, these specific words became the initial search for recorded votes and the double check.

The Town of Vaughan used ‘carried’ and ‘failed’ to indicate the result of any council decision; thus, total decisions made was determined by summing the incidence of these words. Similar to many other cities, Vaughan also used ‘Yeas’ and ‘Nays’ to identify the results of a ‘recorded vote’. ‘Yeas’ was used as the search term for the initial count; ‘Nays’ provided the term for the double check.

Determining the appropriate search variables for the City of Windsor proved more challenging. Windsor used the ‘carried’ and ‘lost’ terminology consistently throughout the minutes. However, difficulty was encountered when attempting to identify the appropriate search variables to determine the total incidence of ‘recorded votes’. Prior to the February 09, 2004 Windsor City council meeting, the phrase ‘recorded vote’ preceded the actual taking of the vote. After February 09, 2004, the phrase was not consistently used prior to the identification of how councilors voted. Through close analysis of 20 sets of council minutes it was determined that the words ‘Yeas’ and ‘Nays’ did appear each time a recorded vote occurred. Thus, these two terms were used as the initial search variables and double checked to determine the total number of recorded votes. It should be noted that this discovery resulted in the recalculation of London’s total recorded votes and the abandoning of the term ‘recorded’ as an appropriate search variable. Additionally, in three cases the link provided on the Windsor website for a specific council meeting was not connected to the correct minutes. This was resolved quickly by City of Windsor staff through email correspondence.

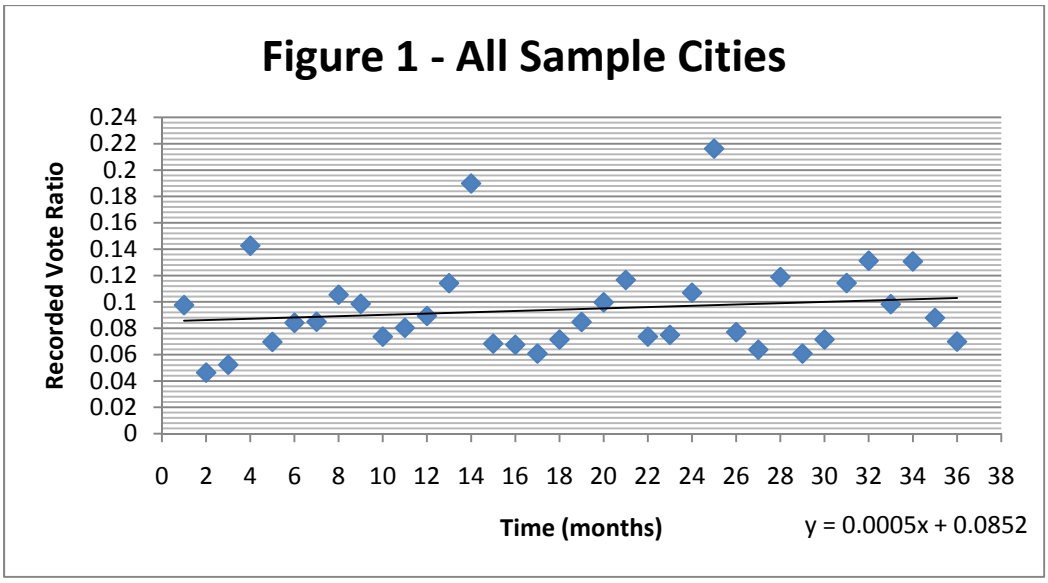
After determining the ‘total decisions made’ and the ‘total recorded votes’ for each council meeting in each city, the ‘recorded vote ratio’ was then calculated for each month over the December 2003 – December 2006 period. This was done by summing the total recorded votes in one month and dividing it by the total decisions made for the same month. This was done both at the city and sample level.

Symbolic vs. Reputational Motivations for Roll Call Votes

To ensure the incidence of recorded votes was not being overtly impacted by the presence of Symbolic recorded votes, a random sample of 142 votes from 2003 -2006, stratified by all cities in the sample and temporally by fiscal quarter, was selected. Of these 142 votes, only 19 or 13% were characterized by all councilors either voting ‘Yea’ or ‘Nay’. Thus, we can conclude that the significant majority of recorded votes are instigated by reputational motivations.

Chapter 4 - Findings and Analysis

Findings supporting both Hypothesis 1 and 2 were observed in the data. The Pearson product-moment correlation coefficient was used to determine the linear dependence between time and the recorded vote ratio. The calculated r value of the Ontario cities, outlined in the sample section, was determined to be: 0.146. Thus, a weak correlation is present between time and the recorded vote ratio when the total recorded votes for all cities are summed for one month and then divided by the total decisions made for the same month. In Figure 1, we see the line of regression and the distribution of data points using the above method of analysis.

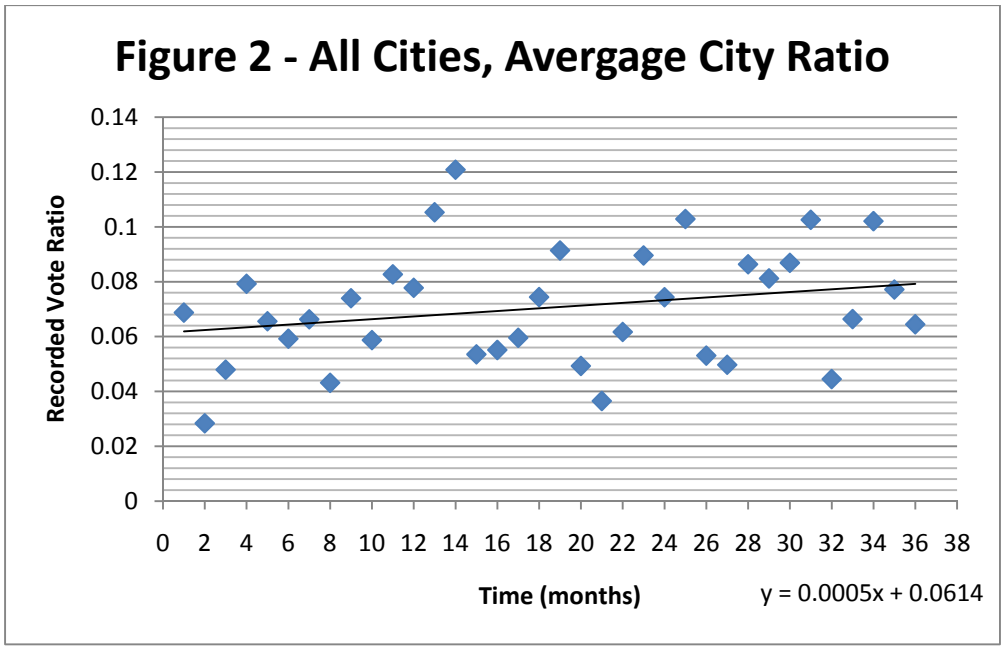


However, the above method of analysis may inappropriately skew the correlation coefficient by over-representing cities with a large number of council decisions made and recorded votes. As seen in Table 2, a large disparity exists among cities regarding total decisions and number of recorded votes. In Windsor, 5001 decisions were documented in the council minutes; comparatively, only 724 were documented in Brampton.

Table 2 – Total decisions and recorded votes					
	Carried	Lost	Total Decisions	Recorded Votes	Recorded Vote %
Ottawa	3374	394	3768	744	19.75%
Brampton	724	11	735	22	2.99%
Hamilton	1628	21	1649	54	3.27%
London	2911	135	3046	190	6.24%
Markham	1524	57	1581	125	7.91%
Vaughan	1509	22	1531	125	8.16%
Windsor	4926	75	5001	495	9.90%
Kitchener	1351	13	1364	90	6.60%
Totals	**17947**	**728**	**18675**	**1845**	**9.88%**

Thus, the data must be normalized such that all cities are weighted appropriately. This was done by summing the recorded vote ratio for each city for each month (Dec. 2003 – Dec. 2006) and dividing by the total number of cities. This calculation results in the creation of a city council average recorded vote ratio for each month and appropriately weighs the results of each city.

The Pearson product-moment correlation coefficient was employed once again to determine the linear dependence between time and the recorded vote ratio. The result was an r value of 0.24; a considerable increase in correlation when compared with the original results of 0.146. Therefore, it can be concluded that when all cities are weighted equally a stronger correlation between the variables is observed. Given the 0.24 r value, it can be further concluded that political competition will increase in the local government councils of class C3 Ontario cities as an election approaches. Figure 2 illustrates the regression line and the data distribution using the latter analysis approach.



Individual City Councils

The data indicates that the correlation between time and the recorded vote ratio in the Ottawa city council is slightly negative (r value: - 0.086108). The direction of this result is contrary to the aggregate result, as seen above, and the individual result of all other cities excluding Brampton (Table 3). Ottawa also differs from all other cities, excluding Windsor in this case, because of the absence of a month in which the recorded vote ratio equals zero (Table 4). Ottawa and Windsor also differ from the rest of the cities in terms of the initial recorded vote ratio. In appendices A-H, only Ottawa and Windsor begin their council term, time index 1, with a recorded vote ratio greater than 0.10. In time index 1, Ottawa council shows a recorded vote ratio of 0.32; this high level of competition exceeds all other months in all other cities and contradicts the first hypothesis. The highest level of recorded vote ratio is also observed in Ottawa, the regression line never dips below 0.15 (Appendix A). To put this in perspective, the highest monthly individual values over three years in most other cities hover around a recorded vote ratio of 0.15. As mentioned in the methodology section, the incidence of documented decision making and recorded votes increases greatly during specified

budget council meetings in Ottawa city council. As hypothesized, we also see a spike in the recorded vote ratio related to the months in which those budget council meetings occur: April 2004; January 2005 and December 2005 (Appendix A). This relationship will be further discussed in a section addressing the second hypothesis. Thus for the 2003-2006 Ottawa city council term, one can conclude that the level of competition in council decreased slightly as the election approached, but was consistently high.

Table 3 – r value of each Municipality	
Municipality	**r value**
Ottawa	-0.086108
Brampton	-0.056451
Hamilton	0.191568
London	0.344714
Markham	0.015309
Vaughan	0.238349
Windsor	0.179818
Kitchener	0.319963

Similar to Ottawa, the correlation between the independent and dependent variable in Brampton's city council was slightly negative (r value: - 0.056451). Remarkably, 20 of the 36 months reviewed for Brampton council had a recorded vote ratio of zero (Appendix B). This varies considerably from the sample city average of 8.25 months (Table 4).

Table 4 - Number of months with zero recorded votes	
City	**Months**
Ottawa	0
Brampton	20
Hamilton	16
London	2
Markham	8
Vaughan	10
Windsor	0
Kitchener	10
Average	**8.25**

Furthermore, the Brampton council month with the highest recorded vote ratio, June 2005 = 0.19, is lower than almost half of all recorded months in Ottawa's city council. If

one excludes May and June of 2005, the Brampton recorded vote ratio is never recorded above 0.08. Comparatively, the average recorded vote ratio across all observations in all cities was 0.06. Thus, very little competition in council was present for the Brampton term 2003-2006; that which was, trended very slightly towards less council competition as an election approached.

In Hamilton's city council, the correlation provided a weak positive result (r value: 0.191568). However, similar to Brampton the number of recorded months in Hamilton's city council in which no recorded votes occurred was considerably higher than the average: 16 of the possible 36 (Table 4), (Appendix C). Contrary to the Ottawa council, the first month that Hamilton city council was together no recorded votes occurred. However, similar to Brampton, 30 of the 36 months in the Hamilton city council were observed to have less than the average recorded vote ratio (0.06). It should also be noted that the major spikes in Hamilton's recorded vote ratio occurred in the summer: August 2004; July 2006 and August 2006 (Appendix C). These summer spikes in recorded vote ratio were not observed in any other city council studied. Thus, when compared to other councils, a lower recorded vote ratio was more prevalent in the Hamilton council. The correlation coefficient was consistent with the overall findings and the hypothesis: as a local government election approaches in Hamilton, council competition increases.

The greatest level of correlation was observed in London city council (r value: 0.347141). Contrary to Brampton and Hamilton, the general level of recorded vote ratio was similar to the high levels observed in Ottawa. In only two months is the recorded vote ratio zero, both of which occur in the first eight months the council was together (Appendix D). A distinct increase in recorded votes is noted in the London council as time progresses; however, in the final seven months the recorded vote ratio fluctuates considerably. In the final seven months, the recorded vote ratio is either high or low.

Overall, council competition increased in London as time progressed, but also became more erratic in year three.

In the Markham city council, a very weak correlation was observed (r value: 0.015309. The most interesting aspect of the observations in Markham is that only one element stands out: the high recorded vote ratio in December of 2005. (Appendix E). Otherwise, the observations in Markham are very close to sample results. Eight months of no recorded vote ratio was noted; very close to the average of 8.25 months. The regression line for Markham's council lands directly on the sample average recorded vote ratio: 0.06. In summary, the competition in Markham council is very slightly correlated to the proximity of an election.

The City of Vaughan council provided the third highest level of correlation between the independent and dependent variable (r value: 0.238349). Similar to Hamilton, no recorded vote ratio was observed for the first month and unlike all other city councils, this trend was continued into the second month (Appendix F). Interestingly, in the final three months of the council term, we see the recorded vote ratio increase over three consecutive months; a trend that does not occur at any other time in the council term. This could be an indication of councilors' last attempt to stake out positions immediately prior to an election. In the council term 2003-2006, competition in Vaughan's city council increased as an election approached.

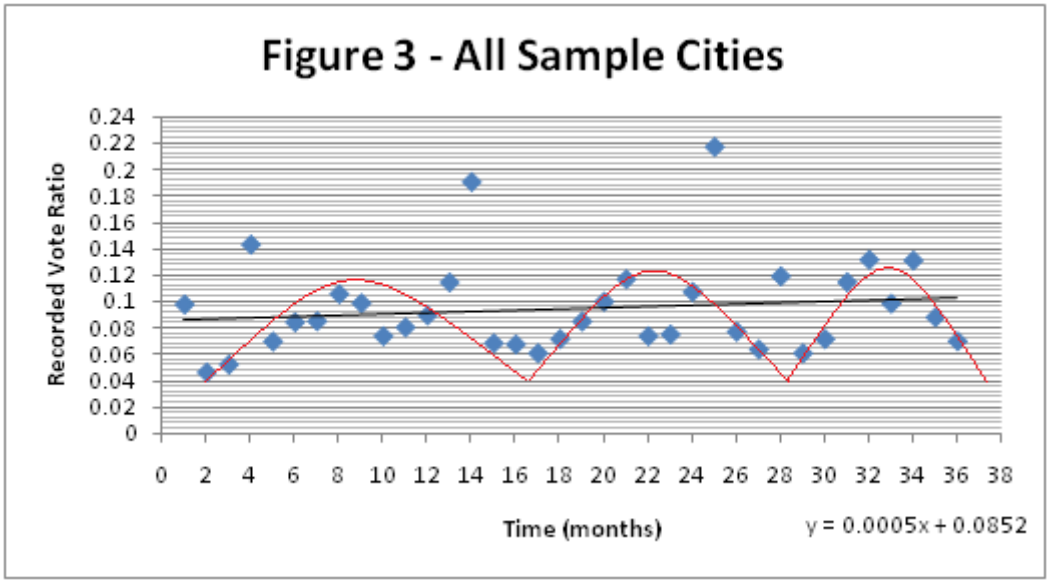
A positive correlation was also observed in the Windsor city council (r value: 0.1798181). Unlike all other city councils, excluding Ottawa, a recorded vote occurred in each month (Appendix G). Also similar to Ottawa, a high recorded vote ratio was noted in the inaugural council meeting. Additionally, only three months fall below the sample average, a recorded vote ratio of 0.06, and the regression line never dips below 0.09; second only to Ottawa in terms of observed recorded vote ratio. January of 2005 and December of 2005 represent the highest levels of recorded vote ratio. The potential for

these spikes to be related to annual budgets will be addressed in the discussion of the second hypothesis. Thus, for the 2003-2006 Windsor city council term one can conclude that council competition and election proximity were positively correlated.

The second highest level of correlation was observed in the City of Kitchener council (r value: 0.319963). In the first 34 months the distribution was similar to Markham. The Kitchener council did not differ greatly from sample averages with the exclusion of one large spike: January, 2005 (Appendix H). However, in the final two months the recorded vote ratio increased considerably. This trend was similar to the one observed in the City of Vaughan; however, only in Kitchener did the highest recorded vote ratio coincide with the final month of council. This could be further evidence of a last attempt by councilors to stake out positions and differentiate themselves from others. Similar to Hamilton, London, Markham, Vaughan, and Windsor a positive correlation between council competition and election proximity was observed.

Polynomial Relationship

The possibility of an unexpected relationship was identified. When summing the total recorded votes in one month and dividing it by the total decisions made for the same month an interesting wave like polynomial is observed (Figure 3). However, when the evenly weighted city average method of analysis is employed this relationship disappears (Figure 2).



It could then be concluded that this polynomial is simply caused by periodicity present in the data of cities with the greater number of decisions made and recorded votes; however, this is not the case. Windsor, Ottawa and London best fit the description of city councils with large numbers of decisions made and recorded votes (Table 2). Yet, no obvious polynomial wave like structure is present in the associated distribution of data for each city council (Appendix A, D, G). This structure is only observed when the data is pooled by summing the total recorded votes in one month and dividing it by the total decisions made for the same month. Interestingly, the estimated peaks of the polynomial in Figure 3 coincide with summer months. This may be due to a decrease in summer time council meetings, a common practice of cities in the sample. Councilors may overcompensate for fewer opportunities to stake out positions by requesting a larger proportion of recorded votes. Further investigation is needed to determine if this relationship occurred by chance.

Hypothesis 2

The purpose of the second hypothesis was to control the potential for annual budget cycles, because of a possible increase in symbolic recorded votes, to impact the

relationship between the independent and dependent variable. Only Ottawa, London, and Windsor city councils identified budget council meetings from other normal meetings of council. The recorded vote ratio from all three cities was then summed for each city for each month (Dec. 2003 – Dec. 2006) and divided by three. This was done with the budget data included and absent. Using the Pearson product-moment correlation coefficient, the r value of our sample with the budget minutes included was determined to be 0.093878 (Appendix Ia). When the budget minutes were removed the strength of the relationship more than doubled: r value 0.189684 (Appendix Ib). In the sample data, the correlation between council competition and the temporal position of an election increases when annual council budget meetings are removed.

An increase in the relationship between election proximity and the recorded vote ratio was observed in each sample city (Table 5). In all cases the r-value increased when budget council minutes were removed. The largest increase was observed in Ottawa (Appendix J), followed by London (Appendix K) and finally Windsor (Appendix L).

Table 5 – r value with budget minutes included and removed

City	r value - Included	r value - Removed	Difference
Ottawa	- 0.086108	- 0.0305257	0.055582
London	0.344714	0.39748329	0.052769
Windsor	0.179818	0.20073628	0.020918

Further Research

From the outset of this research it was the intention to use multiple independent variables and employ multiple regression analysis. The following additional variables were discussed as potentially having an impact on the researched correlation: city council size; wards vs. at large constituency structures; margin of victory in last election; length of time the mayor has been in office; influence of a quasi party system and the number of dedicated local media outlets. However, the accessibility of appropriate data related to these variables hindered the addition of independent variables. Many of the additional variables listed may not vary on a monthly basis. Potential variables such as: city council size; wards vs. at large structures; margin of victory in last election; influence of a quasi party system; and the number of dedicated local media outlets all stay constant over a three year political term. Difficulty was also encountered finding appropriate measures for these variables. For example, to determine the potential for a quasi party system to impact the relationship, seven Ontario local government experts were asked to rank the presence of a quasi party system in each studied municipality. Unfortunately, the surveyed experts did not feel that they had the expertise to rank all municipalities in the sample. Thus, this variable was excluded from the research. To expand the studied correlation to a multivariate analysis, it is first suggested that the time period investigated be extended beyond one municipal council term. This will also provide greater insight into if the polynomial relationship occurred by chance. Secondly, it is suggested that additional data be collected when council minutes are being reviewed. Data such as the number of ‘yeas and nays’ for each vote should be recorded, this would better account for symbolic recorded vote motivations. Also, an individual based ideological continuum, similar to the work done by Smith (1985) in the U.S. Senate, should be included to better account for councilor influences such as quasi party systems.

Chapter 5 - Discussion and Conclusions

In the literature review, it is noted that a controversy is present among scholars regarding the existence of the electoral cycle. The data provided in this research supports the presence of an electoral cycle in Ontario municipal councils. The act of altering one's voting pattern as an election approaches may be consistent with the staking out of positions and differentiation tactics noted at the Ontario Municipal level. Thomas (1985), Amacher and Boyes (1978), Elling (1982) and Ahulja (1994) all found that the proximity of an election alters the manner in which U.S. Senators vote. In the competitive electoral environment, Ontario municipal councilors, like their U.S. Senate counterparts, likely respond with opportunistic and manipulative behavior. When reelection is the interest, politicians become more competitive in an attempt to increase media visibility and connect with likeminded voters.

At the municipal level, Rosenberg (1992) in Israel and Veiga and Veiga (2007) in Portugal, found an increase in budgetary spending prior to an election. Although these findings are at the political body level, the results suggest that the competitive electoral environment is motivating individual politicians to stake out positions. In Israel and Portugal, the decision making majority was staking out a position to increase spending prior to an election. Similarly, the research herein showed that Ontario Municipal councilors engaged in calculating political behavior for the purpose of improving reelection prospects. The results in Ontario, Israel and Portugal are related: politicians become competitive prior to an election to differentiate themselves and ensure the public is aware of their positions.

Through the analysis of recorded votes in Ontario municipalities, the data supported both hypotheses of this research and the presence of an electoral cycle. The level of competition increases in Ontario local government councils as an election approaches. The correlation between competition in local government councils and the

temporal position of an election increases when annual council budget meetings are removed. This research supports the common sense notion that the electoral cycle impacts political behavior.

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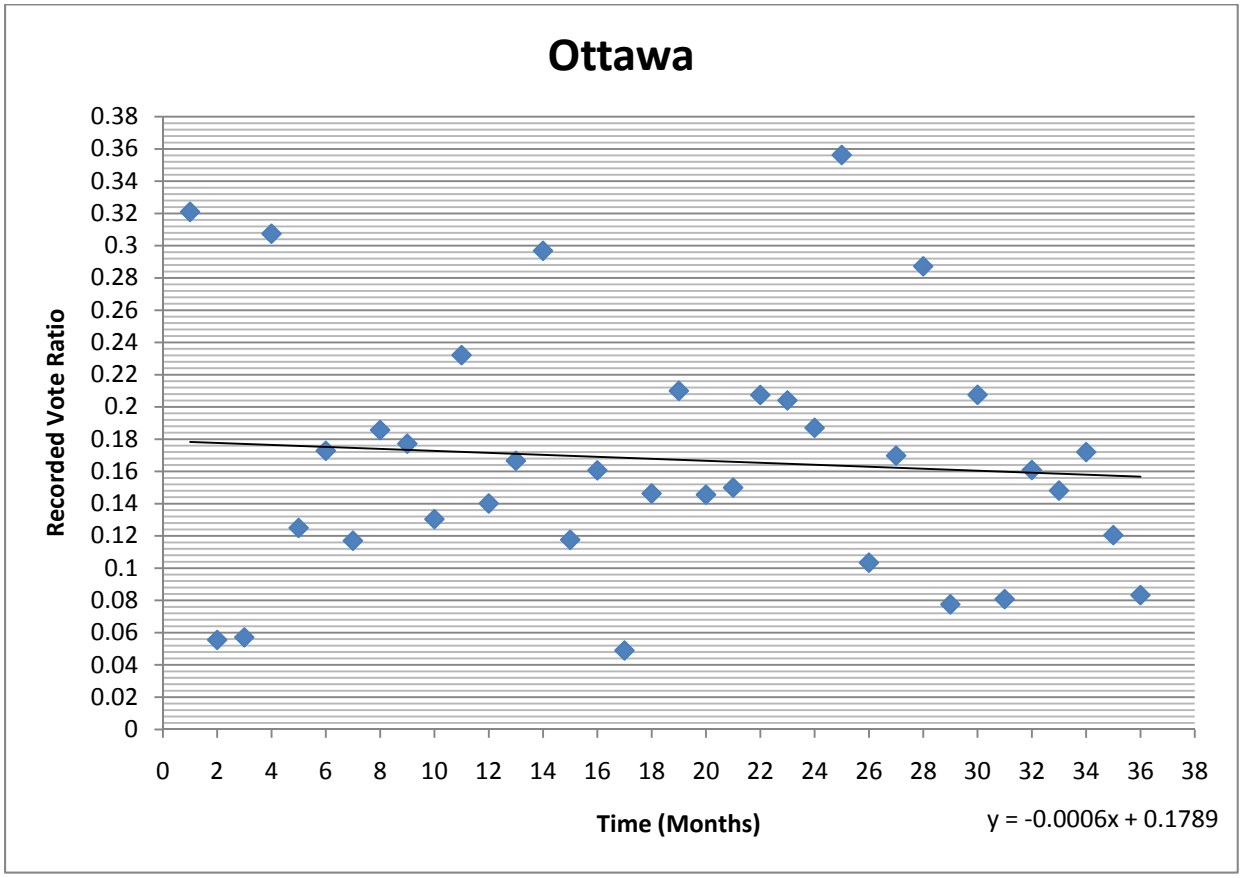
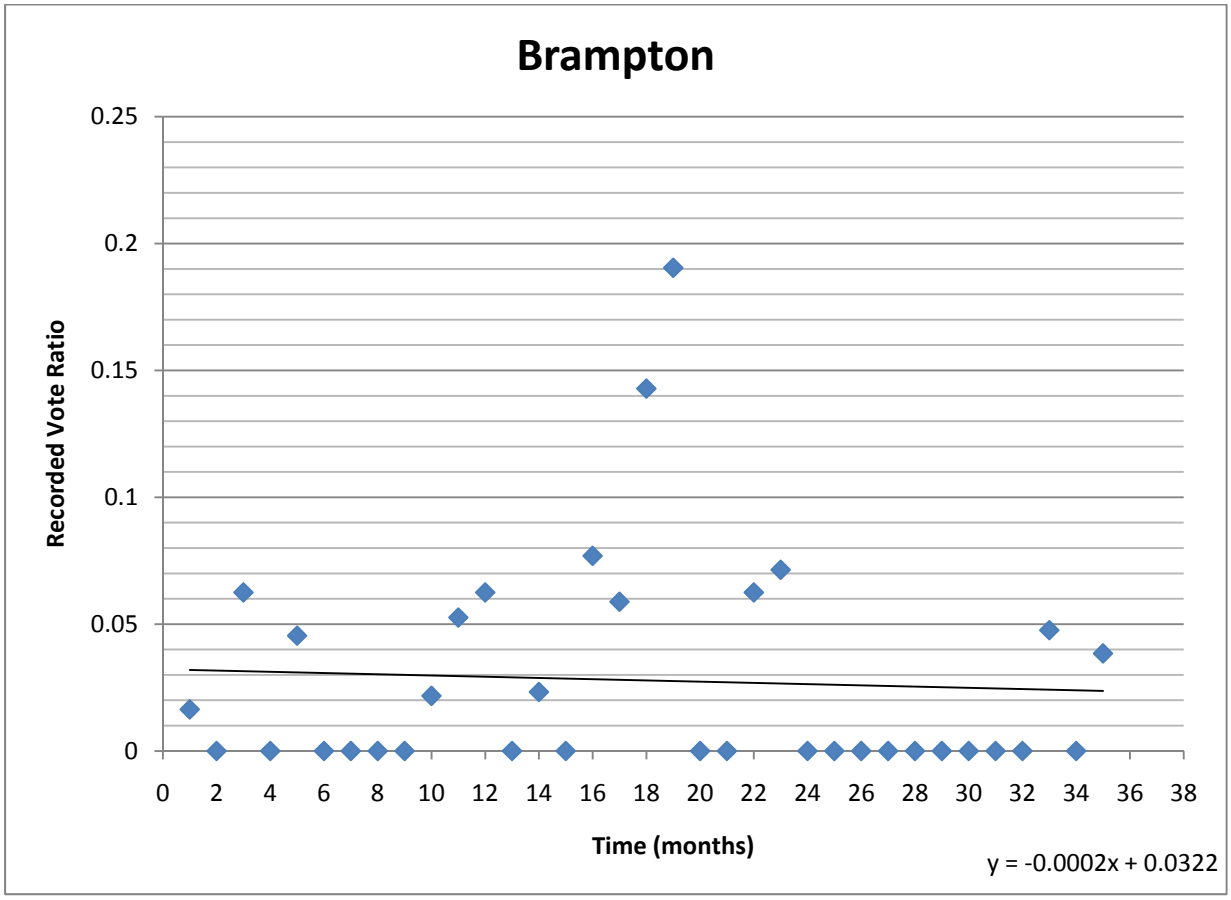
Appendix A


Ottawa
Recorded Vote Ratio
0.38
0.36
0.34
0.32
0.3
0.28
0.26
0.24
0.22
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38
Time (Months)
y = -0.0006x + 0.1789

Appendix B


Brampton
Recorded Vote Ratio
0.25
0.2
0.15
0.1
0.05
0
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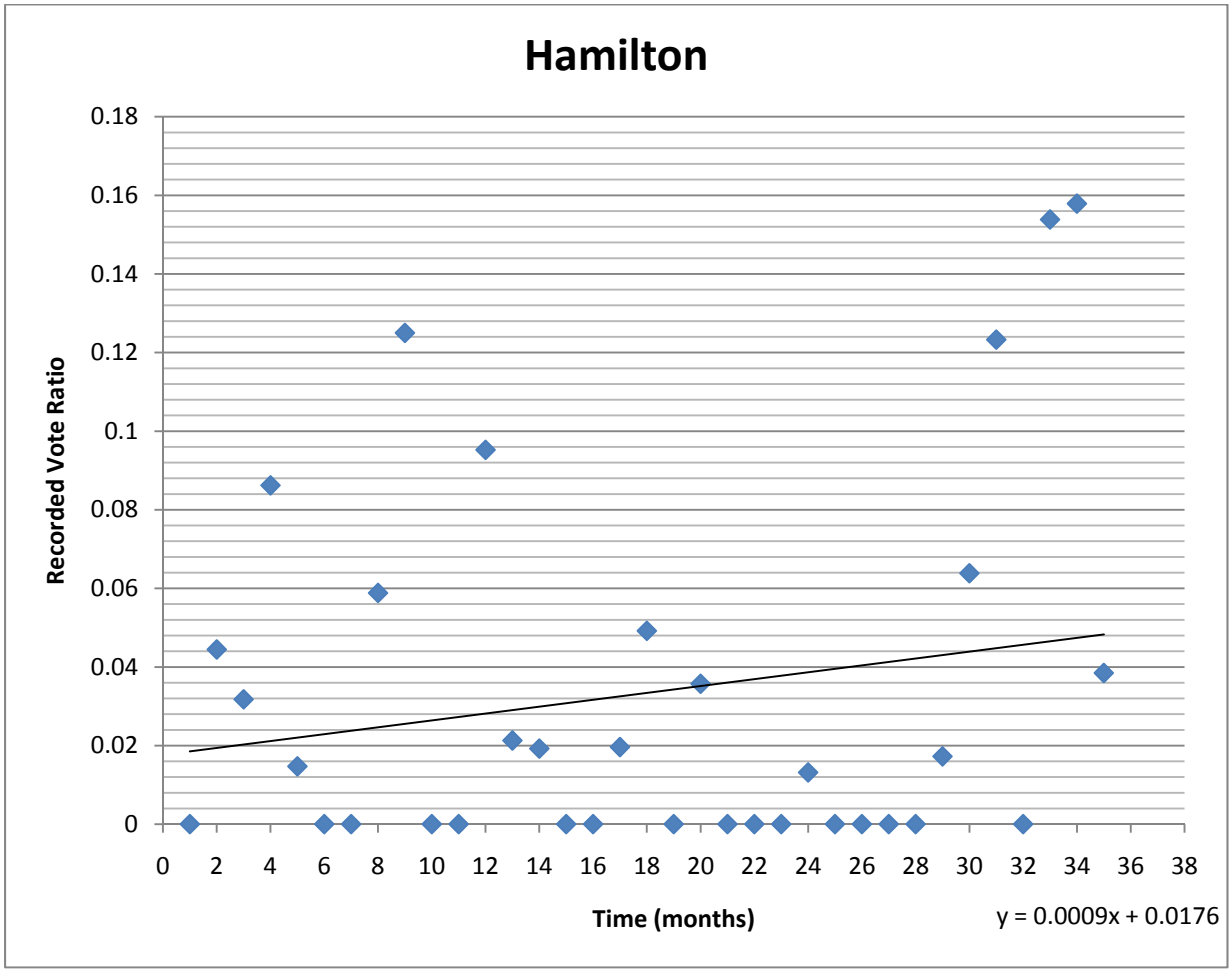
Time (months)
y = -0.0002x + 0.0322

Appendix C


Hamilton
Recorded Vote Ratio
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
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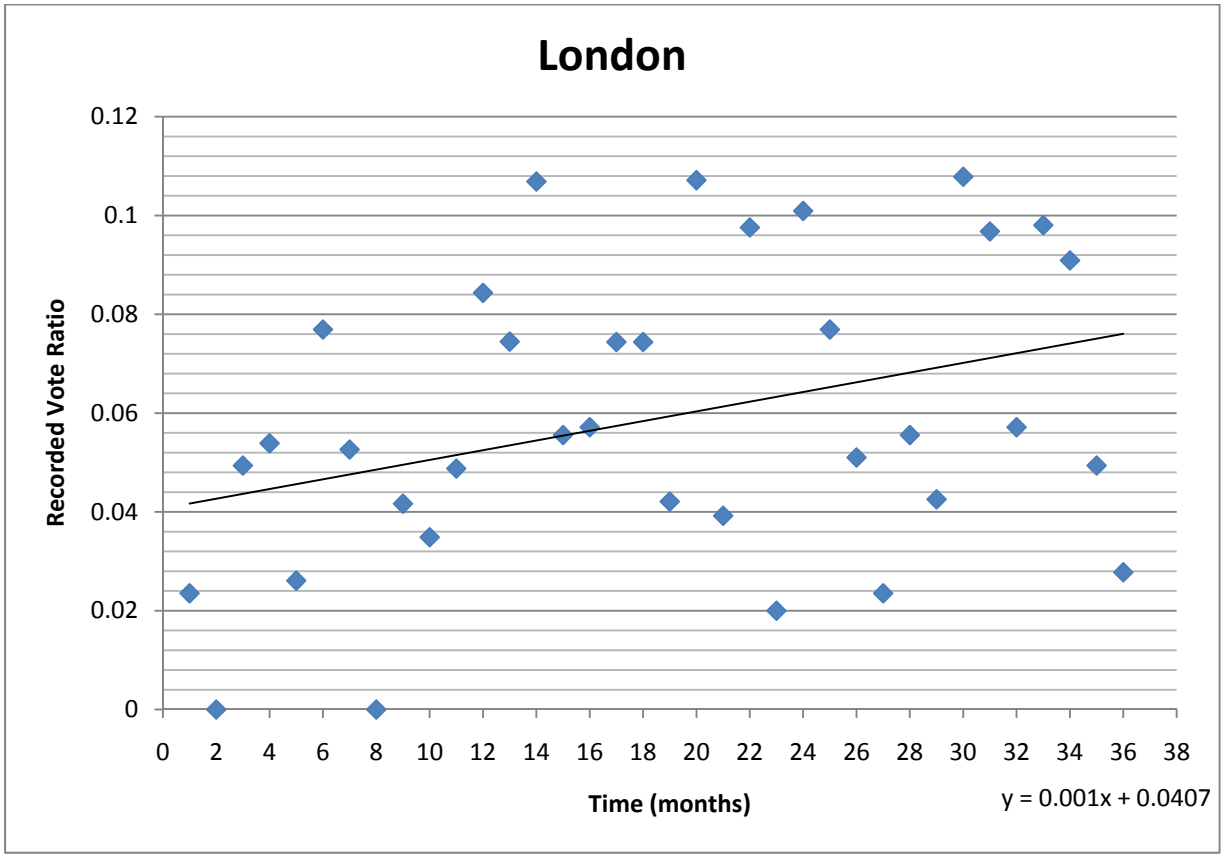
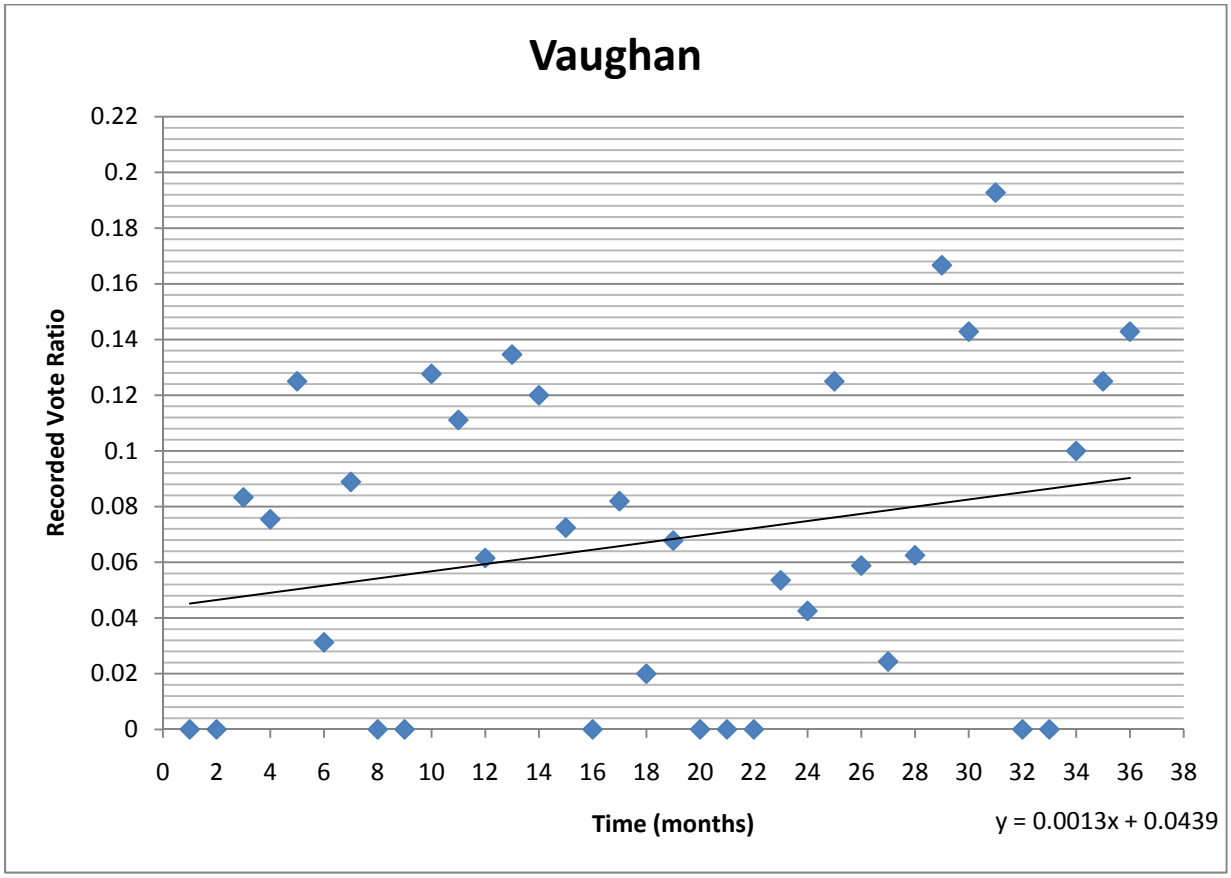
Time (months)
y = 0.0009x + 0.0176

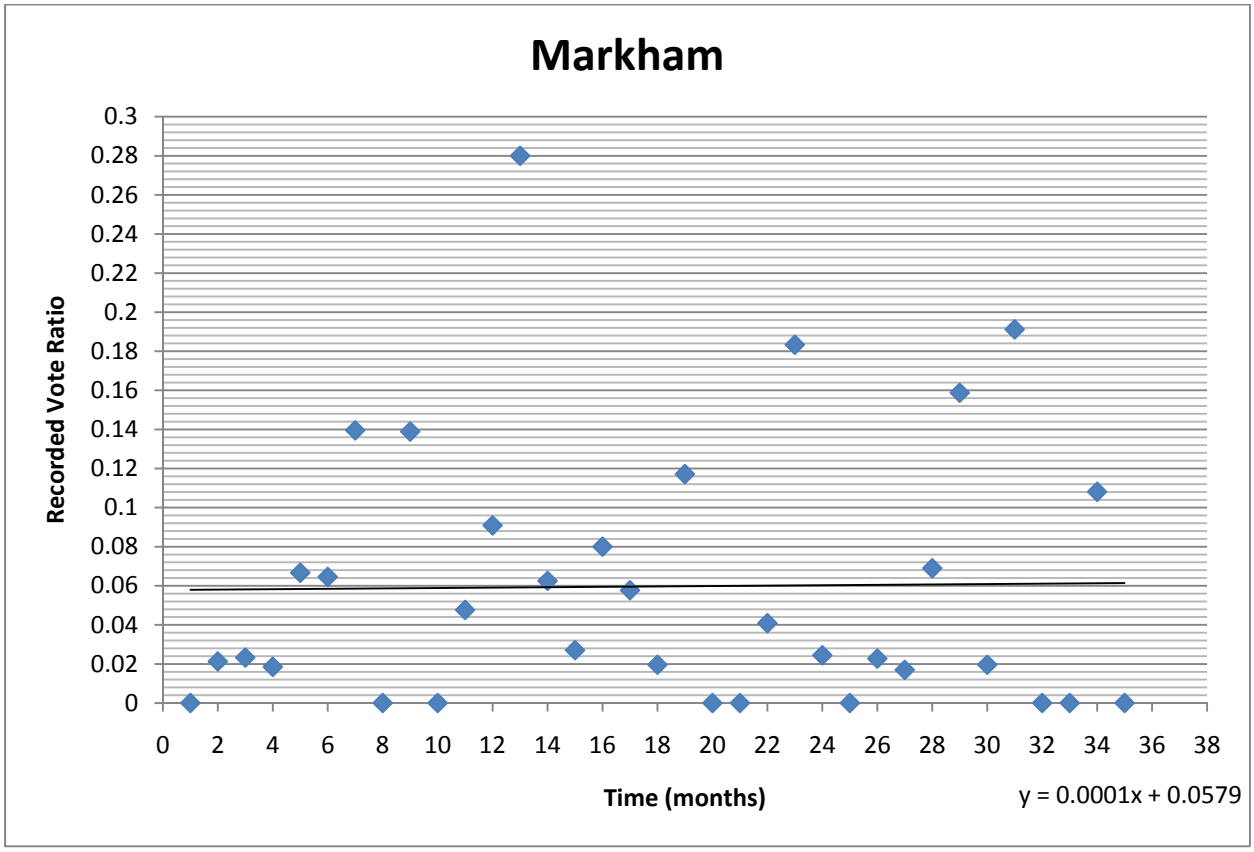
Appendix D


London
Recorded Vote Ratio
0.12
0.1
0.08
0.06
0.04
0.02
0
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38
Time (months)
y = 0.001x + 0.0407

Appendix E


Vaughan
Recorded Vote Ratio
0.22
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38
Time (months)
y = 0.0013x + 0.0439

Appendix F


Markham
Recorded Vote Ratio
0.3
0.28
0.26
0.24
0.22
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
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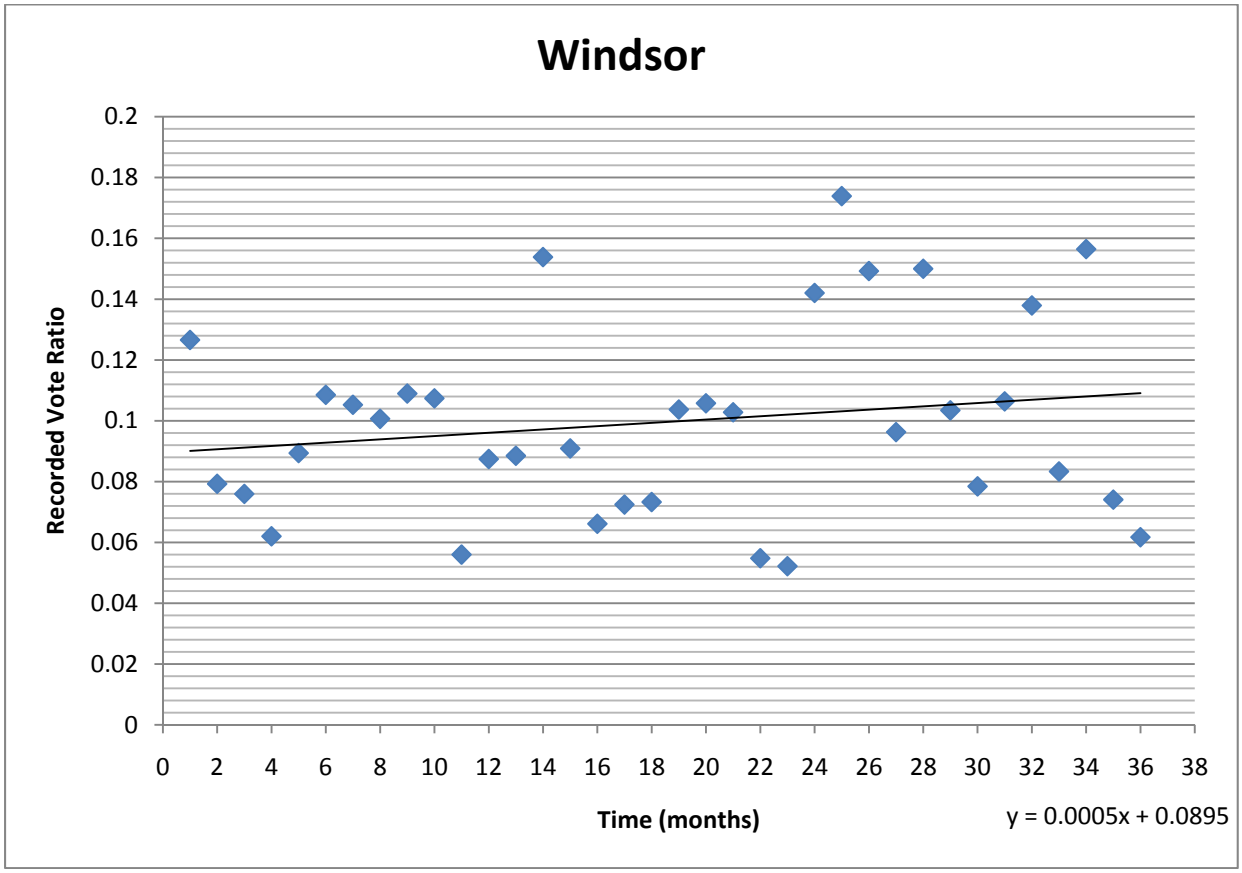
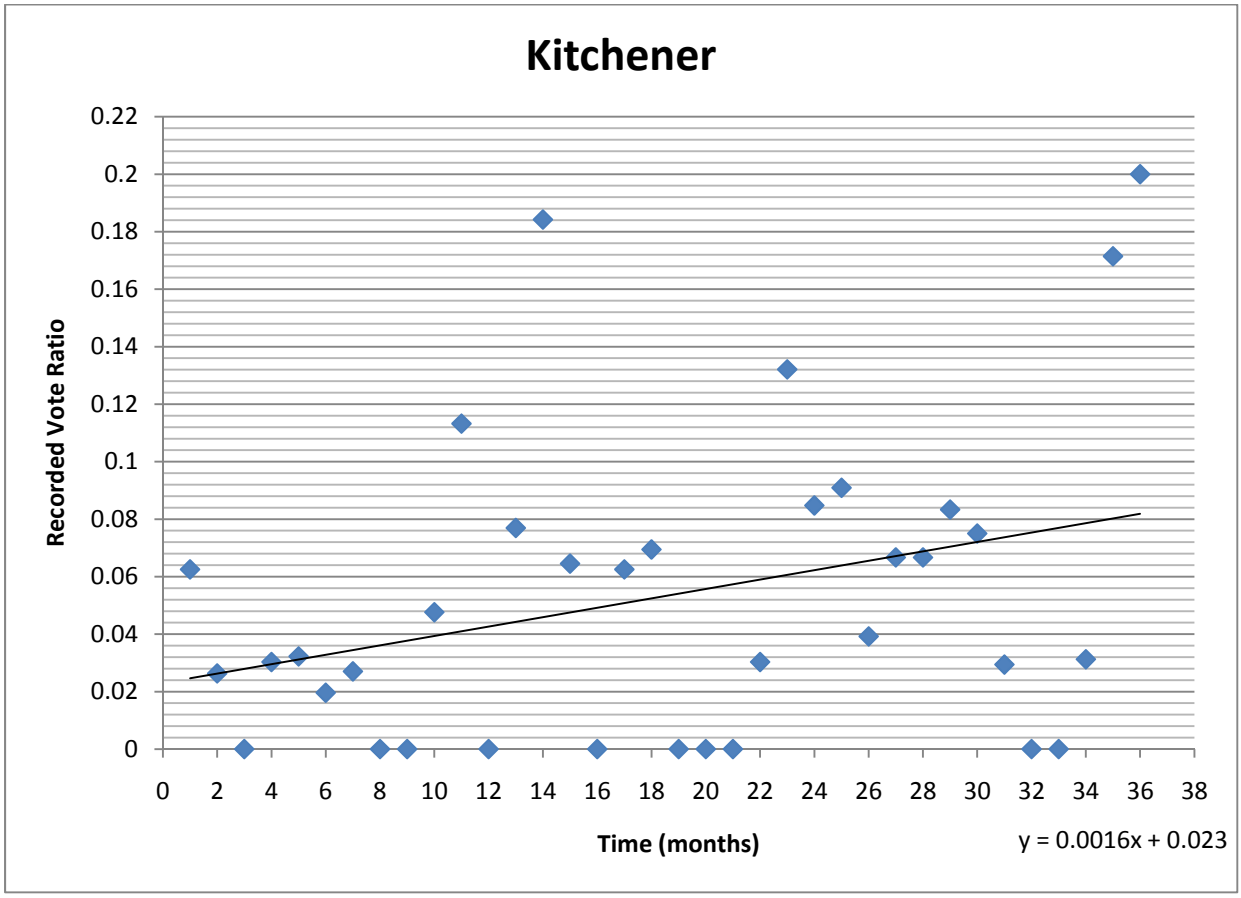
Time (months)
y = 0.0001x + 0.0579

Appendix G


Windsor
Recorded Vote Ratio
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38
Time (months)
y = 0.0005x + 0.0895

Appendix H


Kitchener
Recorded Vote Ratio
0.22
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
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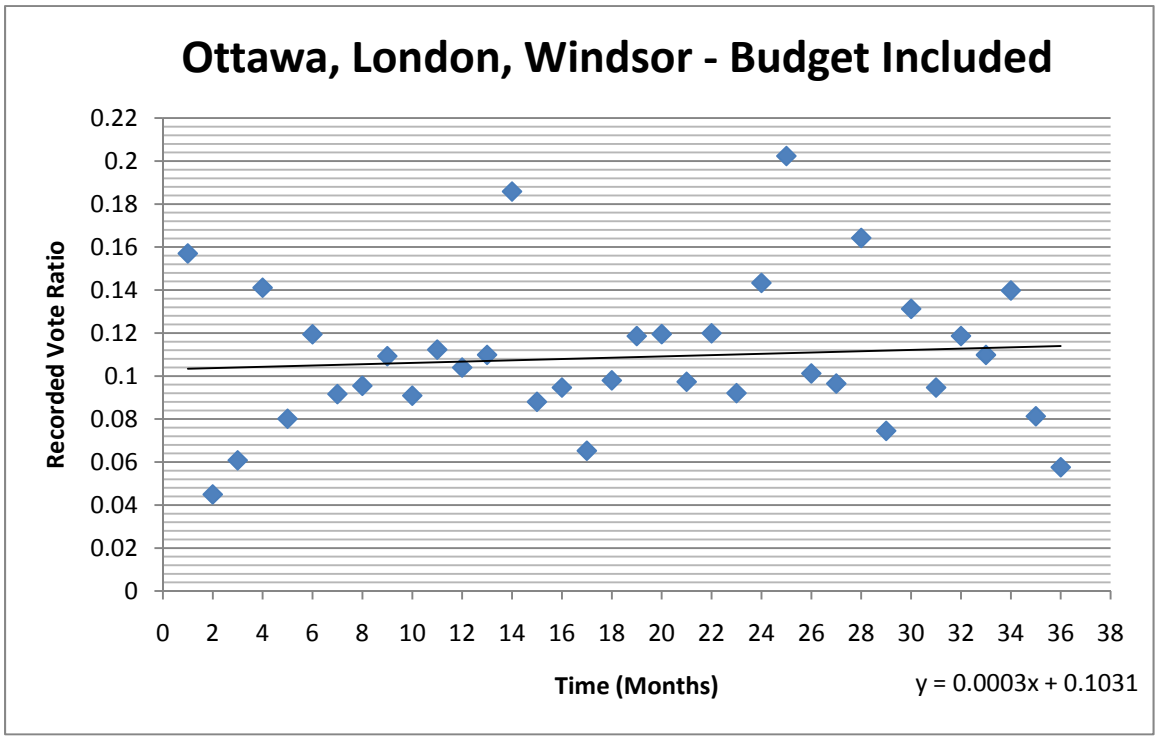
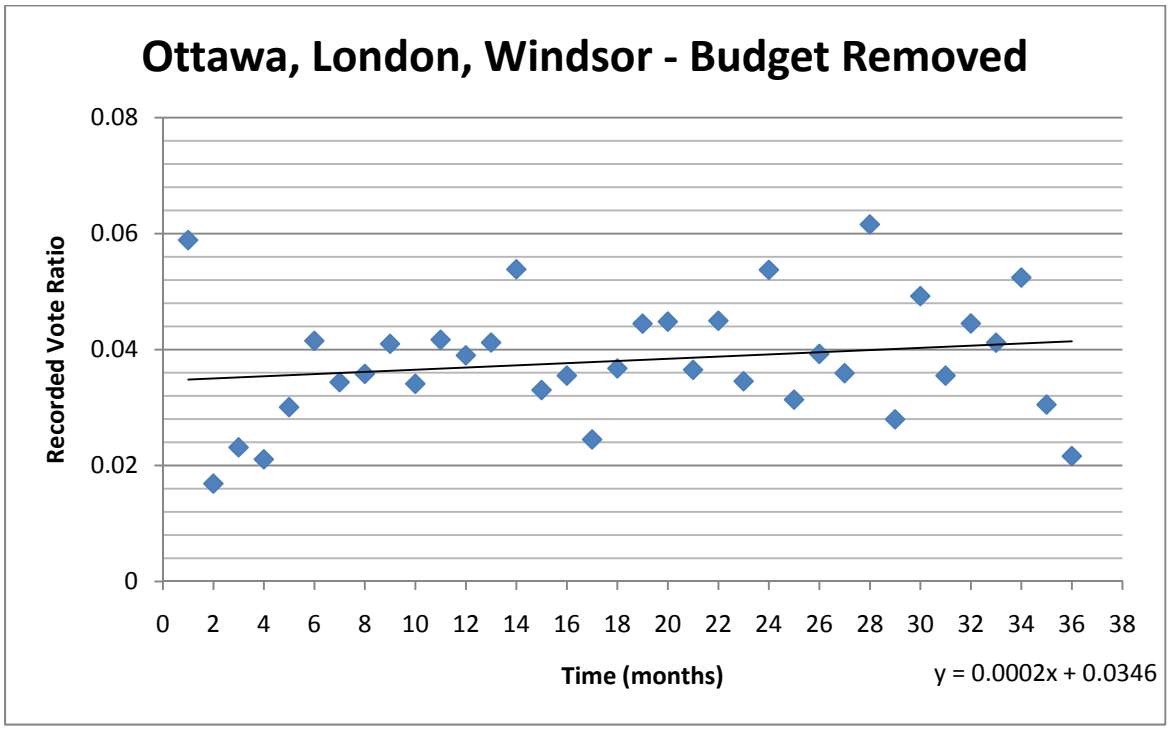
Time (months)
y = 0.0016x + 0.023

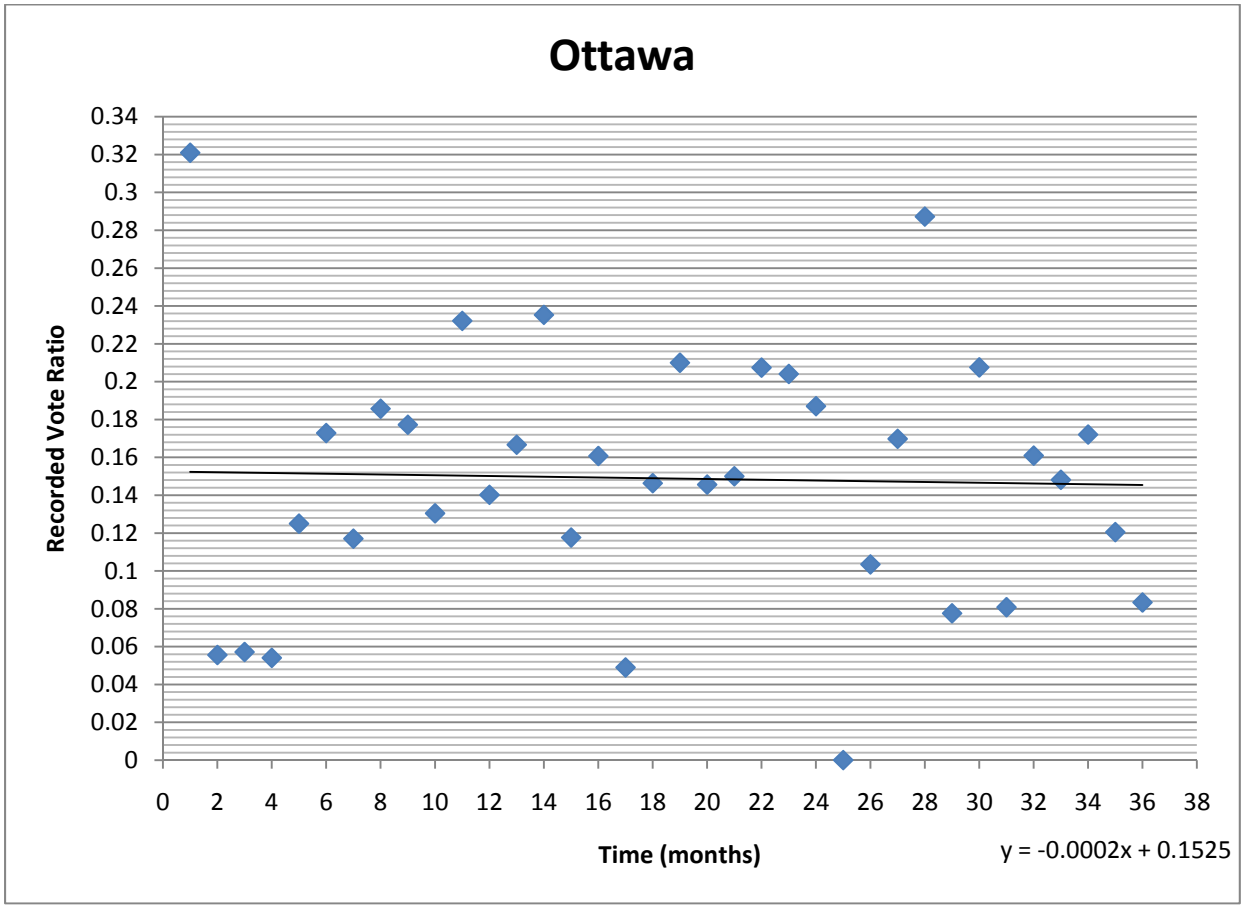
Appendix Ia



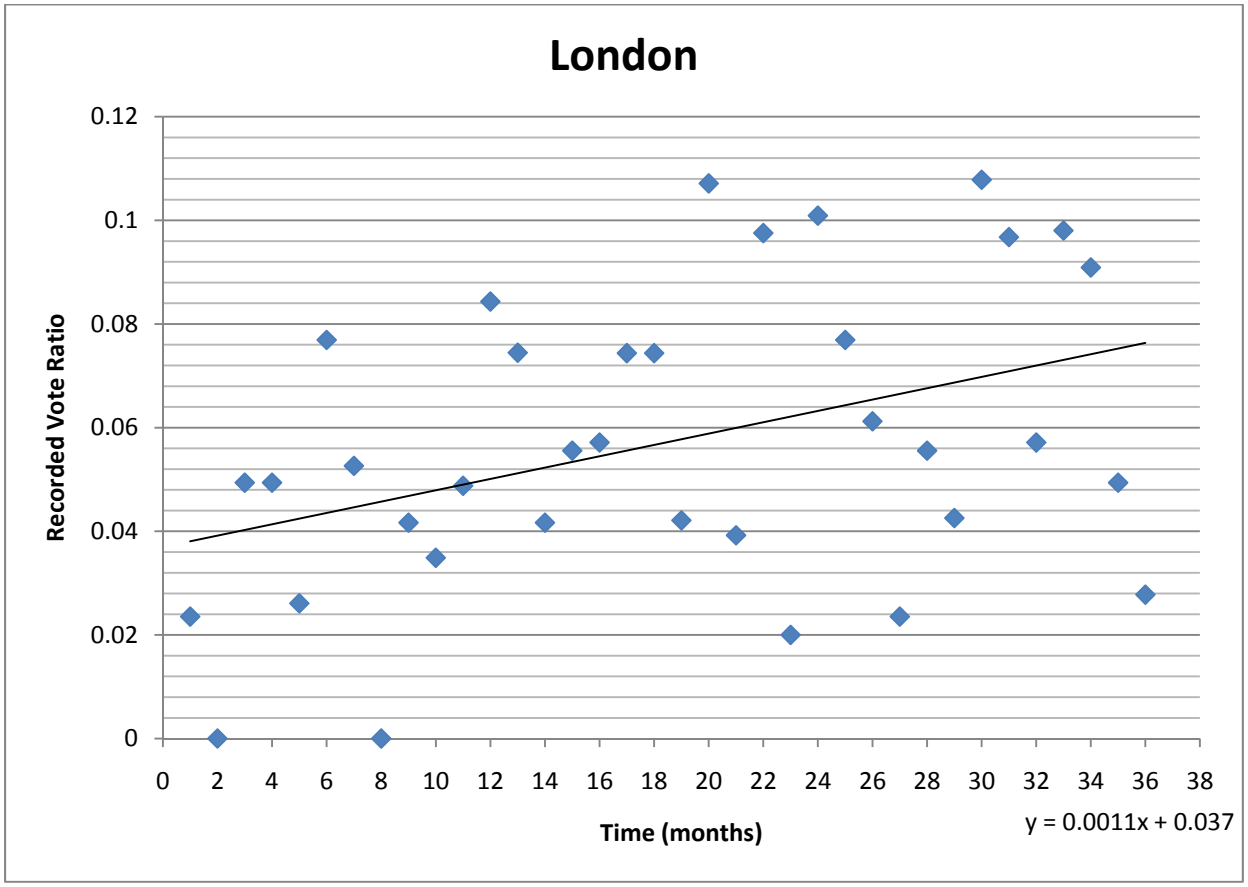
Appendix Ib



Appendix J


Ottawa
Recorded Vote Ratio
0.34
0.32
0.3
0.28
0.26
0.24
0.22
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38
Time (months)
y = -0.0002x + 0.1525

Appendix K


London
Recorded Vote Ratio
0.12
0.1
0.08
0.06
0.04
0.02
0
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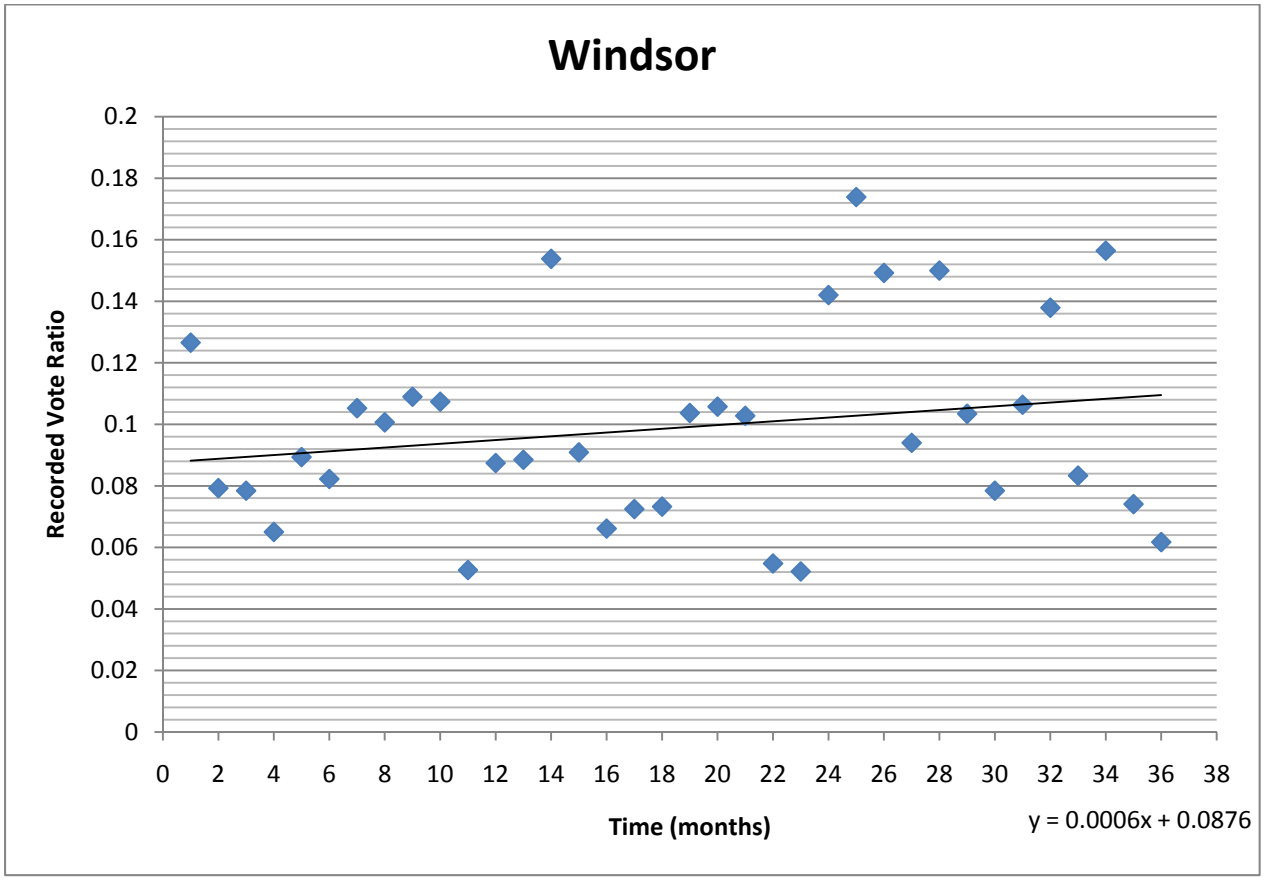
Time (months)
y = 0.0011x + 0.037

Appendix L


Windsor
Recorded Vote Ratio
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38
Time (months)
y = 0.0006x + 0.0876