

# Representative Identity and Policy Outcomes for Equity-Seeking Groups

Evidence from Toronto City Council

by

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A Thesis Submitted in Partial Fulfillment of the Requirements for the

Degree of Bachelor of Arts, Honours

in the Department of Economics

University of Victoria

April 2017

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for

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## Abstract

This paper investigates the impact of electing representatives from equity-seeking groups on policy outcomes. This paper builds on the existing literature on substantive representation by investigating the impact of electing a member of an equity-seeking group on policy outcomes for members of other equity-seeking groups. Using data from Toronto City Council from 2006-2017, I find that women representatives are more likely to vote in favour of policies that benefit visible minorities, disabled, indigenous, and LGBTQ individuals than men. In contrast, I find that visible minority representatives are not more likely to vote in favour of policies that benefit women.

I would like to respectfully acknowledge that this work was done on the unceded traditional territory of the the Lkwungen-speaking and WSÁNEĆ peoples.

## 1 Introduction

Most governing bodies do not mirror the demographics of the population they represent. In Canada, elected representatives are wealthier, whiter, and more likely to be a man than the average Canadian. Furthermore, members of equity-seeking groups, as defined by Toronto City Council as women, visible minorities, disabled, indigenous, and LGBTQ individuals are underrepresented at all levels of Canadian government. Existing studies find that representatives are more likely to vote in favour of policies that benefit their own identity groups (Pande, 1999). Voting patterns motivated by own identity preferences, in combination with the overrepresentation of white men representatives, could lead to worse policy outcomes for underrepresented equity-seeking groups.

This paper adds to the literature on political representation by investigating the effect of electing a representative of one equity-seeking group on policy outcomes for other equity-seeking groups. I use voting records from Toronto's city council to identify if women or visible minority representatives are more likely to vote in favour of policies that benefit equity-seeking groups they do not belong to. Data limitations restrict the scope of this analysis to self-identified women and visible minorities because the numbers of representatives belonging to the other equity-seeking groups are too low. I hypothesize that members of equity-seeking groups are more likely to vote in favour of policies that benefit other equity-seeking groups due to some shared identity characteristic. I find that women, but not visible minorities are more likely to vote in favour of policies that benefit a different equity-seeking group.

In Toronto, Canada's largest city with a population that is 52% visible minorities, the current city council membership comprises of only 11% visible minorities and 32% women (Pagliaro, 2017). No councillors have self-identified as disabled or indigenous, and currently, one councillor has self-identified as a member of the LGBTQ community. Amongst equity-seeking groups, non visible minority, or white, women have the highest vote share on council (City of Toronto, 2017b). Table 1 shows the percentage of representatives by identity group for the council terms of 2006-2010, 2010-2014, and 2014-2017.

There are significant policy implications from my findings. Because women have been found to be more likely than men to vote in favour of policies that benefit other equity-seeking groups, increasing the number of women elected should benefit all equity-seeking groups. As Table 1 shows, women are gaining seats in council at a faster rate than any other equity-seeking group. Assuming this trend continues, policy outcomes for all equity-seeking groups should improve with each election.

Table 1: Percentage of Representatives by Year in Toronto City Council

<b>Identity Factor</b>	<b>2006</b>	<b>2010</b>	<b>2014</b>
Woman	22.73%	36.36%	31.82%
Visible Minority	11.36%	15.91%	15.91%
LGBTQ	2.27%	2.27%	2.27%
Non Visible Minority Women	22.73%	31.82%	29.55%
Visible Minority Women	0.00%	4.55%	2.27%

<sup>1</sup> Source: City of Toronto, 2017a

## 2 Literature Review

### 2.1 Substantive Representation

Research on substantive representation explores the extent to which representative identity effects policy outcomes. A change in representation, for example electing a woman instead of a man, is substantive when it leads to a different policy outcome than what would have originally occurred. Clots-Figueras (2012) exploits close elections in India to estimate the causal effect of female politicians on the population’s educational achievement. They find that women representatives have a greater positive effect than male representatives on education. However, that effect is negligible for individuals living in rural areas, demonstrating the complexities of identity and representation (Ibid.). Pande (1999) uses data from India where some seats are reserved for representatives from economically disadvantaged castes and tribes, which functions as a natural experiment. Pande exploits the lag between the collection of census data and the allocation of reserved seats to isolate the impact of a reserved

seat on policy outcomes. A significant positive relationship is found between the reservation system and increased redistribution towards the economically disadvantaged groups (Ibid.).

In the North American context, Swers (1998) finds that gender exerts a significant and independent effect on voting for women's policies in the US Congress, even after controlling for other influences on voting patterns. The effect is significantly stronger for policies that only affect women, like abortion, and weaker for policies which women hold stronger preferences for but affect all genders, like education. In contrast to most other research, Ferreira and Gyourko (2011) finds no gender effect on policy outcomes among US mayoral positions. The paper uses regression discontinuity from close elections to compare short and long term outcomes. No statistically significant difference is found for the size of government, allocation of expenditures, selected employment categories, or crime rates as a result of mayoral gender. Some theories as to why the findings of this research differ from typical findings include increased competition at the municipal level, and differences in the types of policies dealt with at different levels of government (Ibid.).

Logan (2018) uses historical data from the antebellum era after the civil war to estimate the causal effect of a politician's race on public finance outcomes. They find that each additional black representative elected lead to an increase in per capita county tax revenue and a decrease the black-white literacy gap. Oswald and Powdthavee (2010) identifies a direct relationship between having a daughter and an increased likelihood of supporting political parties that increase public good provisions. Doepke and Tertilt (2008) theorizes that men representatives supported the women's suffrage movement because of possible gains in household utility, which outweighed their personal utility losses. Lastly, a study investigating moral hazard in congressional support for war-time conscription legislation finds that having a draft-

age son reduces legislator support for pro-conscription bills by 10-17% (McGuirk et al., 2017).

## **2.2 Toronto City Council**

Motivated by Toronto’s status as Canada’s most diverse city, Siemiatycki and Salloojee (2002) investigates political representation and demonstrates how the voting records of minority-identity representatives were not necessarily serving minority community interests. When evaluated on policies related to social justice and sustainability the voting records of many minority representatives ranked poorly, and community-based advocates and organizations did not believe the minority representatives were working in the interests of their community. They also find that more conservative members of visible minority communities were being elected than progressive ones, likely in part because most politicians come from business or professional backgrounds. Although dated, Kay (1971) exploits the non-partisan nature of the city council to identify strong voting patterns based on seniority, partisan affiliation (at the provincial or federal level), and age.

# **3 Theoretical Framework**

## **3.1 Framework for a Representative Democracy**

Consistent with the existing literature, I use the “citizen-candidates” framework first developed by Osborne and Slivinski (1996) and expanded by Besley and Coate (1997), which provides a model of a nonpartisan representative democracy. All members of the population are voters with individual policy preferences, and all political candidates self-select from the population. Each voter represents one vote, and the

candidate with the highest number of votes becomes the representative, who will then implement their own policy preferences. Voters have full information about the policy preferences of the candidates. Each vote is a (weakly undominated) best response to others (Ibid.).

The political framework for Toronto’s city council aligns with Besley and Coate (1997) in many ways. The city is divided into 44 districts, referred to as wards, where the citizens in each elect one representative, their councillor, every four years (City of Toronto, 2017b). Representatives are members of the population who self-select themselves to be candidates. Although the incumbency effect, name recognition, and other variables are important factors in candidate success, individual candidates still attract votes based on a policy platform unique to them. No political parties, or “teams”, of any sort exist, but newspapers and local organizations can endorse candidates. The candidate with the most votes wins and becomes the ward’s representative.

Using the Besley and Coate (1997) “Economic Model of Representative Democracy” I assume all representatives are utility maximizers, and individual votes  $V_i$  represent the utility-maximizing choice for each representative.  $V_i$  is a binary “yes” or “no” vote on each proposed policy. I further assume utility to be a function of  $R$ , representative status, a binary status of being elected or not, and  $X$ , the representative’s set of policy preferences. The policy preferences of citizens are represented in their representative’s utility function through  $R$  as citizens can vote representatives out of their positions. For all periods where an individual is elected, they receive gains to their utility as a result of getting to be the representative, if they are not elected  $R$  is set to zero and they receive no utility. It is worth noting that for Toronto City council representatives are paid as full-time employees, meaning  $R$  represents their income as well as a status. The representative must balance their desire to

remain elected with the utility gains they see from having their preferred policies enacted. I further assume that this function will be heterogeneous across different representatives. Through this model, representatives who share the policy preferences of their citizens derive a higher level of utility than those who do not. The function for individual vote on policy  $i$  by representative  $r$  is given by

$$V_{r,i} = MaxU_r(R, X). \quad (1)$$

For investigating policy outcomes, we set  $R$  to 1, assuming the representative has already been elected, and we hold  $X$  stable, assuming policy preferences will not change.

### 3.2 Identity and Policy Preferences

Within the “citizen candidate” framework, standard economic assumptions about identity and utility apply to both citizens and candidates. Akerlof and Kranton (2000) introduce identity factors, like race and gender, into individual’s utility function,

$$U_j = U_j(a_j, a_{-j}, I_j). \quad (2)$$

Utility for individual  $j$  depends on the usual vectors of  $j$ ’s actions  $a_j$ , the actions of others  $a_{-j}$ , as well as their own identity or self-image  $I_j$ . While  $a_j$  and  $a_{-j}$  are responsible for consumption,  $I_j$  is a function of  $j$ ’s identity characteristics which can increase (or decrease) with social status as well as interact with  $a_j$  and  $a_{-j}$  because identity effects actions (Ibid.).

$$I_j = I_j(a_j, a_{-j}; c_j, \epsilon_j, P) \quad (3)$$

Identity  $I_j$  is a function of the individual’s assigned social categories  $c_j$ , their own given characteristics  $\epsilon_j$ , and prescriptions  $P$ . For clarity, “woman” would be an example of a social category which would have a different value than the social category “man”. A prescription,  $P$  would exist for how a woman should behave as well as the characteristics she should have, while  $\epsilon_j$  represents the characteristics she has. The individual seeks to maximize their utility through their actions  $a_j$  while taking  $c_j$ ,  $\epsilon_j$ , and  $P$  as given (Ibid.).

In the context of political representation, Akerlof and Kranton’s model allows for members of the population to derive utility from voting for and being represented by candidates with identity characteristics that either match or complement their own. The findings of Bohm et al. (2013) support this theory by modelling an “identity utility” that voters can derive from voting for a candidate with a shared identity. A woman experiencing an increase in utility from another woman being elected requires their actions  $a_j$  to be affected by their social category  $c_j$ , would lead to an increase in “identity utility”. Furthermore, voters derive additional utility if they vote for what they consider the “ethical” policy as based on a number of personal and cultural factors (Feddersen et al., 2009). For representatives, the model helps explain why a representative may vote in support of policies that benefit people who share their identity factors, even if they do not directly benefit, because  $c_j$  would increase as the social category becomes better off.

As in Section 2.1, I assume that each representative votes in a utility maximizing way, balancing election status, policy preferences, and identity based preferences. Each policy vote  $V_{ri}$  represents the utility maximizing position for each representative  $r$ . As the literature on substantive representation has shown, identity characteristics can influence voting outcomes based on the representative’s identity utility. Formalized, that requires

$$V_{ri} = \text{Max}U_r(R, X, I_r). \quad (4)$$

By expanding Equation 1, which was based on Besley and Coate (1997), through the addition of an identity utility factor has devised by Akerlof and Kranton (2000), I can model how identity can affect representative voting behaviour. In practice, this means that when voting for a policy that benefits women, a woman representative would derive a positive identity utility. For the same vote, a representative without the identity of woman would receive either a negative or non-existent identity utility. This formalizes findings from Clots-Figueras (2012), Swers (1998), Logan (2018) and others within Akerlof and Kranton's model.

My hypothesis requires for identity utility gains to be possible for individuals not belonging to the identity group who benefit. These potential identity gains need to be separate from any utility derived from  $R$  or  $X$ , to represent identity-based gains. I formalize this within Akerlof and Kranton's model by theorizing the existence of an additional  $c_j$  representing being from an equity-seeking social category within the existing set of social categories  $C$ . Under Akerlof's base model the set of identity characteristics based only gender and ability would be represented as:

$$C_{w1} = [Woman, Able - bodied] \quad (5)$$

For an able-bodied woman, compared to the social categories for an able-bodied man:

$$C_{m1} = [Man, Able - bodied] \quad (6)$$

Under my assumption of an additional shared social category for members with equity-seeking status(ESS) the set for the woman changes

$$C_{w2} = [Woman, Able - bodied, ESS] \quad (7)$$

while the man's remains the same

$$C_{m2} = [Man, Able - bodied]. \tag{8}$$

If a social category for equity-seeking groups exists and has a positive effect on identity utility, then a woman representative should be more likely to vote in favour of a policy benefiting disabled individuals than the man, all else equal. This result would imply that the existence of ESS leads to gains in identify utility that otherwise would not exist. This shared category for equity-seeking groups would mean that policy outcomes for all ESS members would improve as a body of representatives becomes more diverse.

## 4 Data

I base my empirical analysis on Toronto City Council, which is a non-partisan governing body with the largest municipal budget in Canada (Gormanns, 2015). Toronto city council is an autonomous local government with citizens directly electing both a councillor for their ward (electoral district), as well as a mayor. The 44 councillors and the mayor each have a single vote on all motions and serve four-year terms with no term limits.

Demographic information by city ward is compiled by city staff using Canadian census data (City of Toronto, 2017c). An unfortunate limitation of this data is that it is only currently provided based on the 2011 census, so my controls are static. However, I am still able to compare demographic differences between wards as they existed in 2011. In addition, significant concerns have been raised about the overall quality of 2011 census data more broadly. As the first Canadian census to be conducted on a voluntary basis, there was a relatively low response rate of 21%

(Statistics Canada, 2013). Furthermore, the *National Household Survey User Guide* notes a likelihood for there to be non-response bias present as “non-respondents tend to have different characteristics from respondents” (Ibid, p.12). I also collect the mayoral voting records for each ward, and use the percentage of the ward who voted for a right-wing candidate as a control for political ideology. I include the full set of control variable summary statistics in the appendix.

Information on the councillors was gathered from their official profiles (City of Toronto, 2017b), their Wikipedia page (2017) and verified using local news reports (Pagliaro, 2017; Ngabo, 2017; Goldsbie, 2014). Gender was determined based on pronouns used in biographies, and visible minority status was determined based on biographies. Gender and visible minority status were verified using local news reports on diversity in the city council.

Voting records are available for download on the city’s website from 2009 to present, with prior records contained in downloadable meeting minutes (City of Toronto, 2017a). I include votes from December 5th, 2009 to November 9th, 2017, which includes all votes in the 2006-2010 and 2010-2014 terms, and approximately two-thirds of votes that will occur during the 2014-2018 term. I include votes only on the adoption of a policy, as opposed to votes on policy amendments and other business. Votes relevant to equity-seeking groups were manually identified primarily based on motion title, and verified using background information provided to councillors. Motions were only counted as relevant to an equity-seeking group if either the background information provided or the motion itself specified that equity-seeking individuals would specifically benefit, and not the general population. For example, the motion “Marcus Garvey Centre for Leadership and Education” has been counted as a vote that benefits a marginalized community because the backgrounder provided stated that “The Centre, which was established to provide leadership development

and training skills to African-Canadian youth” (City of Toronto, 2009). Had the backgrounder not specified the significant to the African-Canadian community the motion would have been believed to be of equal importance to all populations and not included.

I separate motions into two categories to identify cross-identity substantive representation. “Gender Policies” contains all motions specifically relevant to women, while “Equity Policies” contains all motions relevant to visible minorities, disabled, indigenous, and LGBTQ individuals. The full list of policies selected as relevant are listed in the appendix. I calculate the fraction of votes in favour of both Gender and Equity Policies for each councillor, scaled to the number of votes they were in council for (to account for by-elections). I count only “Yes” votes as being in favour of the policy, and treat both “No” votes and absences as non-favourable. Significant limitations exist given this identification strategy; the likelihood that I exclude a relevant motion due to human error is high, and there is also a smaller chance that I have incorrectly included irrelevant motions.

Table 2: Policies Identified per Term

<b>Term</b>	<b>Gender Policies</b>	<b>Equity Policies</b>
2006	5	9
2010	19	39
2014	17	19
Toal	41	67

<sup>1</sup> Source: City of Toronto, 2017a

Table 2 shows the number of policies by term. I identify a total of 67 relevant Equity Policies; 9 in the 2006-2009 term, 39 in the 2010-2014 term, and 19 in the 2014-

2018 term, which is still on-going. All relevant motions are listed in the appendix. I identify a total of 41 Gender Policies; 5 in the 2006-2009 term, 19 in the 2010-2014 term, and 17 in the 2014-2018 term. I cannot identify why there were significantly more relevant motions passed in the 2010-2014 term.

Table 3: Average Fraction of Yes Votes by Policy Type and Identity Characteristic

<b>Identity Factor</b>	<b>All Policies</b>	<b>Equity Policies</b>	<b>Gender Policies</b>
Woman	0.806	0.722	0.778
Man	0.725	0.791	0.825
Visible Minority	0.760	0.802	0.787
Non Visible Minority	0.748	0.733	0.792

<sup>1</sup> Source: City of Toronto, 2017a; City of Toronto, 2017b

Table 3 shows the average fraction of “Yes” votes on each policy type by identity characteristic. For all Equity and Gender Policies, a “Yes” vote represents a positive vote on the respective policy. Due to time limitations, I could not check if a “Yes” vote on all policies represented an increase in government expenditure or size. I find councillors will vote in favour of an equity policy 74% of the time on average, and a gender policy 79% of the time. Women and visible minorities were more likely to vote in favour of both Equity and Gender Policies, then men and non visible minorities. Looking at votes on all policies, I find that women are more likely to vote “Yes” by about 8%, while the difference between visible minority and non visible minority councillor voting is small. Because no controls for other influences on voting behaviour are being used, and the contents of the “All Policies” category is unknown, I caution against any conclusions about voting patterns based on Table

3.

## 5 Empirical Strategy and Results

As introduced in Section 2.2 I suggest an extension to Akerlof and Kranton (2000) framework for integrating identity into individuals utility functions. Given the emphasis on diversifying governments, and the disproportionate growth in the number of women elected compared to other equity-seeking groups, I question if the advancement of one equity-seeking group benefits other equity-seeking groups as well. If this is true, members of equity-seeking groups would be more likely to vote in favour of policies that benefit any equity-seeking group, not just their own.

I hypothesize the existence of a social category shared by all member of equity-seeking groups, which I refer to as equity-seeking status *ESS*. All members of equity-seeking groups belong to the social category of *ESS* in addition to their specific equity-seeking category. The existence of identity utility makes ESS representatives more likely to vote in favour of policies that benefit other equity-seeking groups. To test for the existence of *ESS* I need to isolate the effect of identity characteristics on representatives votes from all other factors that contribute to voting patterns. If *ESS* exists, there should be a significant positive effect from being an *ESS* member on the likelihood for voting on all policies that benefit equity-seeking groups.

Given how few members of equity-seeking groups currently serve as city councilors, I am only able to test for the effects of gender and visible minority status on voting outcomes. As outlined in the data section, I have identified votes on policies that would benefit equity-seeking groups excluding women, as well as policies that benefit women specifically. If *ESS* exists and is positive, then women should be more likely to vote in favour of policies for the former group, and visible minorities

should be more likely to vote in favour for the latter.

## 5.1 Endogeneity Issue

Testing for the existence of *ESS* relies on identifying the likelihood of voting in favour of a policy that benefits equity-seeking populations by identity characteristic. Controlling for voting preferences can be difficult given the large number of observable and unobservable factors that can impact political preferences. Furthermore, without an exogenous event separating the proportion of equity-seeking councillors in council and the fraction of votes in favour of equity-seeking policies it is challenging to prove causality.

Existing literature on substantive representation faces a similar issue. Clots-Figueras (2012) and others use close elections to simulate a random change from a women representation compared to a man, but there have been too few close elections in Toronto council for me to replicate this strategy. Swers (1998) and Quamruzzaman and Lange (2016) both use simple probit or logistic regressions and the associated marginal effects. Ozdamar (2017) utilizes pooled ordinary least squares, method of moments estimation, as well as a fixed effect estimator. In line with the existing literature, I begin using a fractional response model, and then use nearest neighbour matching to simulate an endogenous change in the gender and visible minority status of a representative.

## 5.2 Fractional Response Model

My dependent variable is the fraction of times a councillor votes in favour of a policy benefiting equity-seeking groups. Since using a normal regression risks estimating values outside of the interval, I utilize a basic fractional response model. The frac-

tional response model fits a regression for the mean of the fraction of votes in favour conditional on councillor identity as well as ward demographic factors within the fixed interval. Although this approach does not deal with the issue of endogeneity, it does provide a starting point for our estimates and deals with the issue of fractional variables better than other approaches. I begin with the linear model:

$$E(V_i) = B_1 + B_2 \text{Representative's Identity} + B_3 \text{Ward Characteristics} + u_i \quad (9)$$

I control for all representative identity factors (gender, visible minority status, LGBTQ status, previous terms served) and ward characteristics (mayoral vote, visible minority population, unemployment rate, average household income, fraction of renters versus owners, population age, and education levels). I use the `fracglm` estimator (Williams, 2017) in Stata to constrain the dependant variable  $V_i$  to be between (0,1). This method has been found to be is fully robust and relatively efficient under the GLM assumptions (Wooldridge, 2011). The marginal effects for Equity Policies and Gender Policies are measured individually and displayed in Table 4. Full results are included in the appendix.

I find women are more likely to vote in favour of Gender Policies, by approximately 11 percentage points, which is statistically significant at the 5% level. Women are also 7 percentage points more likely to vote in favour of Equity Policies, statically significant at the 10% level. In comparison, visible minority representatives were 9 percentage points more likely to vote in favour of Equity Policies, significant at the 15% level, but they were not more likely to vote in favour of Gender Policies at any level of significance. Notably, ward characteristics including mayoral vote, visible minority population, and age demographics outweigh all representative characteristics in terms of effect. These results speak to the importance of the non-identity factors within the representative's utility function (and by extension voting patterns).

Table 4: Fractional Regression Results

	(1)	(2)
	<b>Equity Policies</b>	<b>Gender Policies</b>
Gender (d)	0.0712** (0.0362)	0.107*** (0.0371)
Visible Minority (d)	0.0942* (0.0563)	0.0402 (0.0517)
<i>N</i>	137	137

Column 1 shows the percentage point increase in the likelihood a representative will vote in favour of an Equity Policy as a result of being either a woman or visible minority. Column 2 represents the the same figure for a Gender Policy.

Marginal effects; Standard errors in parentheses

(d) for discrete change of dummy variable from 0 to 1

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

These results do not support the existence of ESS, as that would require both women being more likely to vote in favour of Equity Policies and visible minorities being more likely to vote in favour of Gender Policies, when only the former is true. They do support women representatives gaining utility from gains to other equity-seeking groups.

### 5.3 Nearest Neighbour Matching

The nearest neighbour matching (NNM) technique estimates treatment effects from observational data by inputting the missing potential outcome for each subject by using an average of the outcomes of similar subjects that receive the other treatment

level (Stata, 2014). For this study, I use NNM to estimate the average treatment effect of having a women councillor on the fraction of votes in favour of Equity and Gender Policies. For gender, the average treatment effect (ATE) is calculated based on

$$ATE_{gender} = E(V_w - V_m). \quad (10)$$

Where  $V_w$  represents the fraction of votes in favour of a policy from a woman representative and  $V_m$  represents the fraction of votes in favour of a policy from a man with otherwise similar characteristics to  $V_w$ .  $ATE_{gender}$  is the effect of having a woman representative over a man on that vote, holding other factors constant. The same equation holds for calculating the effect of having a visible minority representative.

Table 5: Nearest Neighbour Matching Results

	(1)	(2)	(3)	(4)
	Equity Policies	Gender Policies	Equity Policies	Gender Policies
ATE				
Woman	0.0887*** (2.65)	0.0776* (1.67)		
Visible Minority			0.141** (2.46)	0.0200 (0.36)
$N$	137	137	137	137

Columns 2 and 3 show the average treatment effect (ATE) of having a woman rather than a man on the likelihood of a representative voting in favour of Equity Policies and Gender Policies, respectively.  $t$  statistics in parentheses

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Matching based on both representative identity (excluding the identity factors that treatment effect is based on) and ward characteristic factors lead to results similar to the fractional regression. I force exact matches for identity factors, and bias adjust all non-binary factors. Table 5 reports the results. The average treatment effect from having a woman representative (over a man) is found to be 8.9 percentage points on Equity Policies, and 7.8 percentage points on Gender Policies, statistically significant at 1% and 10% respectively. The average treatment effect from having a visible minority representative (over a non visible minority representative) is 14.1 percentage points on Equity Policies, statistically significant at 5%, while the effect on Gender Policies is positive but not statically significant at any level.

## **5.4 Accounting for Political Ideology**

While the non-partisan nature of Toronto City Council has allowed me to use the Osborne and Slivinski (1996) model of a representative democracy, it also means I cannot control for political beliefs in my analysis. When looking at a similar model constructed by Swers (1998), political ideology (as measured by an independent think tank) is controlled for. I believe political ideology likely affects voting behaviour. Because city councillors do not have official partisan affiliations, and no independent analysis of councillor ideology exists for this period, I create a proxy control. Each year the council must vote to pass a budget, and in most years ad hoc motions are tabled to either substantially increase or decrease property taxes. I assume that a vote to substantially increase taxes to be representative of left-wing ideology, while a vote to substantively decrease taxes to represent a right-wing ideology. I use this as a proxy for a better control variable for political ideology.

Although this approach does not provide a robust solution to the issue, it does

Table 6: Support for Property Tax Increase by Identity Group

<b>Identity Group</b>	<b>Percentage Support</b>
Women	56.4 %
Men	36.6 %
Visible Minority	29.1%
Non Visible Minority	44.5 %

Table 7: Fractional Regression Results with Political Ideology Control

	(1)	(2)	(3)	(4)
	Equity Policies	Equity Policies-Tax	Gender Policies	Gender Policies-Tax
Gender (d)	0.0712** (0.0362)	0.0798** (0.0369)	0.107*** (0.0371)	0.107*** (0.0374)
Visible Minority (d)	0.0942* (0.0563)	0.0808 (0.0590)	0.0402 (0.0517)	0.0414 (0.0530)
Left Tax Control		-0.0872* (0.0501)		0.00795 (0.0451)
<i>N</i>	137	137	137	137

Results from Section 5.2 are reproduced in columns 1 and 3.

Columns 2 and 4 show the same fractional regression results with the addition of the left-wing property tax control “Left Tax Control”.

Marginal effects; Standard errors in parentheses

(d) for discrete change of dummy variable from 0 to 1

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

give some direction for future research. Table 6 shows that both women and non visible minorities are more likely to support left-wing legislation in the form of tax

increases. These results are consistent with existing literature that documents a trend of left-wing support from women (Edlund and Pande, 2002) as well as Siemiatycki and Saloojee (2002) discussed above which noted a trend of conservative political ideology from visible minority men. Repeating the fractional regression with this additional parameter leads to highly inconclusive results, reported in Table 7. It increases both the coefficient and significance level for women on Gender Policies while decreasing both the coefficient and significance level for visible minorities on Gender Policies. For Equity Policies the coefficient on the left-wing property tax is negative and significant at 10%, while it is positive and insignificant at all levels for Gender Policies. I conclude that although political ideology should be accounted for in a study of this nature, a better proxy is required.

## 6 Conclusion

My results do not support the existence of a shared identity characteristic amongst equity-seeking groups. However, they do support women representatives being more likely to vote in favour of policies that benefit other equity-seeking groups than men by approximately 7-9 percentage points. Although ESS is not the cause of this result, as I theorize, it does imply that women representatives gain utility from utility gains to other equity-seeking groups. Analysis of political ideology and representative behaviour points to potential weaknesses in my methodology. For a more complete approach, a different body of representatives, such as the U.S. Congress, should be used in place of Toronto City Council. Although utilizing a partisan body would require a more complex framework than Osborne and Slivinski's, political ideology would be able to be controlled for, and results would confirm how much of ideology is endogenous to identity. Although inconclusive, my results do support improved

outcomes for equity-seeking groups as the number of women representatives increases.

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## A Appendix: Full Results

### A.1 Control Variable Summary Statistics

Control Variable	Mean	S.D.	Min	Max
Pervious Terms	1.576642	1.276038	0	4
Right-Wing Mayor	.3929139	.1573605	.0938236	.7960102
Visible Minority Population	.483695	.2067703	.1771892	.9006809
Unemployment Rate	9.487591	1.945676	6.4	12.9
Average Income	.9808012	.3243741	.6006572	2.322101
Owners vs. Renters	.8786402	.4661568	.1921331	2.306789
Population 19 and Under	.2126387	.0455106	.0988903	.286553
Population 65 and Over	.1448287	.0273559	.0983585	.2018282
No High School Dipolma	.1807626	.0725009	.0544692	.3567205
High School Diploma	.2430319	.0457188	.1482609	.3271721

## A.2 Fractional Regression

	(1)	(2)
	Equity Policies	Gender Policies
Gender (d)	0.0712** (0.0362)	0.107*** (0.0371)
Visible Minority (d)	0.0942* (0.0563)	0.0402 (0.0517)
LGBTQ (d)	-0.0566 (0.170)	-0.509*** (0.160)
Previous Terms	-0.0102 (0.0131)	-0.0218* (0.0129)
Right-Wing Mayor	0.265* (0.136)	0.211* (0.122)
Visible Minority Population	-0.247* (0.143)	-0.193 (0.139)
Unemployment Rate	0.0204 (0.0254)	0.0351* (0.0207)
Average Income	0.0308 (0.0869)	0.0511 (0.0933)
Owners vs. Renters	0.00876	0.0430

	(0.0504)	(0.0464)
Population 19 and Under	-1.469 (0.932)	-2.599*** (0.746)
Population 65 and Over	-1.120 (0.733)	0.229 (0.587)
No High School Diploma	-0.161 (0.372)	-0.559 (0.365)
High School Diploma	0.323 (1.071)	1.830* (0.950)
<i>N</i>	137	137

Marginal effects; Standard errors in parentheses

(d) for discrete change of dummy variable from 0 to 1

### A.3 Fractional Regression with Political Ideology

	(1)	(2)
	Equity Policies	Gender Policies
Gender (d)	0.0798** (0.0369)	0.107*** (0.0374)
Visible Minority (d)	0.0808 (0.0590)	0.0414 (0.0530)
PTaxLeft	-0.0872*	0.00795

	(0.0501)	(0.0451)
LGBTQ (d)	-0.0211 (0.161)	-0.513*** (0.160)
Previous Terms	-0.0107 (0.0130)	-0.0217* (0.0129)
Right-Wing Mayor	0.136 (0.165)	0.222 (0.138)
Visible Minority Population	-0.246* (0.144)	-0.194 (0.138)
Unemployment Rate	0.0196 (0.0254)	0.0352* (0.0205)
Average Income	-0.00727 (0.0857)	0.0544 (0.0957)
Owners vs. Renters	0.0116 (0.0494)	0.0426 (0.0459)
Population 19 and Under	-1.437 (0.923)	-2.601*** (0.745)
Population 65 and Over	-1.285* (0.735)	0.247 (0.608)
No High School Diploma	-0.237	-0.554

	(0.362)	(0.363)
High School Diploma	0.362	1.828*
	(1.021)	(0.949)
<hr/>		
<i>N</i>	137	137
<hr/>		

Marginal effects; Standard errors in parentheses

(d) for discrete change of dummy variable from 0 to 1

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## B Appendix: Relevant Policies

### B.1 Equity Policies

Agenda Item #	Agenda Item Title
2007.MM57	PRIDE Toronto Grant
2008.AU9.4	Audit of City Performance in Achieving Access, Equity and Human Rights Goals
2008.CD16.7	Marcus Garvey Centre for Leadership and Education
2008.CD16.8	2008 Access, Equity and Human Rights (AEHR) - Community Partnership and Investment Program (CPIP)
2009.CD25.11	2009 Allocations - Access, Equity and Human Rights (AEHR) - Community Partnership and Investment Program (CPIP)
2009.MM36.7	20th Anniversary of the Toronto Recognition of the Tiananmen Massacre - Councillor Vaughan, seconded by Councillor Lee

2010.CD34.12	Access, Equity and Human Rights Partnership and Investment Program (AEHR) – 2010 Allocation Recommendations
2010.EX39.6	Diversity and Positive Workplace Strategy
2010.GM27.17	Property Tax Exemption for the Society of Portuguese Disabled Persons Building Fund
2011.CD5.12	Access Equity and Human Rights Program 2011 - Allocation Recommendations
2011.EX4.3	2010 Election Accessibility Report
2011.MM13.5	Accessible Parking Permits - by Councillor Kristyn Wong-Tam, seconded by Councillor Mike Del Grande
2011.MM2.7	Request for Apology for the media article 'Too Asian?' - by Councillor Mike Layton, seconded by Councillor Kristyn Wong-Tam
2012.CC23.3	City of Toronto Support for the Assembly of First Nations Annual General Assembly in Toronto July 16 to 20, 2012
2012.CC24.1	Potential Sponsorship Opportunities for the Assembly of First Nations Annual General Assembly in Toronto July 16 to 20, 2012
2012.CD14.14	Access, Equity and Human Rights Investment Program (AEHR) - 2012 Allocation Recommendations
2012.EX21.12	2011 Progress Report on Equity, Diversity and Human Rights (EDHR) Achievements
2012.MM24.17	Accessible Meetings and Technology - by Councillor Adam Vaughan, seconded by Councillor Doug Ford
2012.MM25.18	Ceremonially Dedicating Lower Jarvis Street as "Warriors Way" - by Councillor Pam McConnell

2013.CD21.6	Access, Equity and Human Rights Investment Program - 2013 Allocation Recommendations
2013.CD22.8	Toronto Youth Equity Framework
2013.EX28.13	Taxicab Industry Review - Submission from the Disability policies Committee
2013.EX32.1	Amendments to City of Toronto Anti-Discrimination Policies
2013.EX33.12	Toronto Fire Services - A Path to Diversity
2013.EX34.22	Disability policies Committee - Parks Plan 2013 - 2017
2013.MM33.15	Honouring Nelson Mandela - by Councillor Pam McConnell, seconded by Councillor Michael Thompson
2013.MM36.11	Aboriginal Employment Strategy - by Councillor Mike Layton, seconded by Councillor Michael Thompson
2013.MM36.33	Supporting New Aboriginal Affordable Housing at 160-162 Kenwood Avenue - by Councillor Joe Mihevc, seconded by Councillor Ana Bailo
2013.MM39.24	Reaffirming Toronto's Strong Support for Freedom of Religion and Expression - by Councillor James Pasternak, seconded by Councillor Joe Mihevc
2013.MM41.26	Resources to enhance compliance with Accessibility for Ontarians with Disabilities Act - by Councillor James Pasternak, seconded by Councillor Mary-Margaret McMahan
2013.MM41.31	Toronto Fire Services - Diversity Goals and Metrics - by Councillor Michael Thompson, seconded by Councillor Janet Davis

2014.CC54.5	Status Update - Internet Voting Service for Persons with Disabilities for the 2014 Municipal Election
2014.CD26.2	Toronto Youth Equity Strategy
2014.CD29.12	Access, Equity and Human Rights Investment Program - 2014 Allocation Recommendations
2014.CD30.8	Update on Options for a Lesbian, Gay, Bisexual, Trans, Queer/Questioning, and Two-Spirited (LGBTQ2S) Youth Focused Shelter or Transitional Housing
2014.EX38.2	Aboriginal Employment Strategy
2014.EX38.8	Native Child and Family Services of Toronto
2014.EX39.8	Accessible Bus Route - Eglinton Avenue East and Rumsey Road
2014.EX43.5	2013 Progress Report on Equity, Diversity and Human Rights (EDHR) Achievements
2014.EX44.17	Update on the Toronto Social Procurement Framework
2014.MM48.14	Declaration of Hispanic Heritage Month for the month of October - by Councillor Cesar Palacio, seconded by Deputy Mayor Norm Kelly
2014.MM48.36	Release of Section 37 Funds, 66 Isabella Street, for Rainbow-Coloured Pedestrian Crossing Areas and Streetscape Improvements in Celebration of World Pride - by Councillor Kristyn Wong-Tam, seconded by Deputy Mayor Norman Kelly
2014.MM55.50	Enhancing Accessibility on Sidewalks in the City of Toronto - by Councillor Frances Nunziata, seconded by Councillor Peter Leon

2014.MM55.53	Call for a National Inquiry into Missing and Murdered Aboriginal Women - by Councillor Joe Mihevc, seconded by Councillor Mike Layton
2014.MM55.55	Commemorating the History of Immigrant Communities in the Bloor and Bathurst Neighbourhood - by Councillor Ceta Ramkhalawansingh, seconded by Councillor Mike Layton
2014.PW33.8	Ceremonial Street Dedication in Honour of Nelson Mandela
2015.CD6.2	Community Investment Funding Programs - 2015 Allocation Recommendations (Access, Equity and Human Rights, Community Safety, and Pan Am Festivals)
2015.EX10.16	Truth and Reconciliation Commission of Canada Recommendations
2015.EX4.13	Ticketing of Vehicles During Pick-up and Drop-off of Persons with Disabilities
2015.EX4.3	Transmittal of the Report on the Identification, Removal and Prevention of Barriers to Accessibility in the 2014 Municipal Election
2015.EX8.39	Syrian Refugee Crisis - Options for a City of Toronto Resettlement Program
2015.EX9.11	Options for Providing a Property Tax Exemption for the Ismaili Centre and the Aga Khan Museum
2016.EX14.8	City of Toronto Social Procurement Program
2016.EX15.20	Disability, Access and Inclusion Advisory Committee Request respecting the 2016 Accessibility Plan Status Report from the Toronto Transit Commission
2016.EX20.30	Accessible Communication at Meetings

2016.EX20.32	Accessible Bus Routes
2017.CD18.2	Toronto Fire Services Diversity, Recruitment and Inclusion Plan Update
2017.CD21.1	Towards an Action Plan for Transgender Youth
2017.EX26.25	Proposed Aboriginal Office for the City of Toronto
2017.EY24.49	Emery Village - First Nations Park
2017.MM24.23	Toronto for all - United as an Inclusive Sanctuary City - by Mayor John Tory, seconded by Councillor Joe Cressy and Councillor Joe Mihevc
2017.MM24.24	Endorsing the Charter for Inclusive Communities - by Councillor Joe Mihevc, seconded by Councillor Joe Cressy
2017.MM31.14	Reinstating the City's LGBTQ2S+ Community Advisory Committee - by Councillor Kristyn Wong-Tam, seconded by Councillor Paul Ainslie
2017.MM32.8	Denouncing Acts of Hate and Intolerance in Toronto - by Councillor Joe Mihevc, seconded by Councillor Neethan Shan

## B.2 Gender Policies

<b>Agenda Item #</b>	<b>Agenda Item Title</b>
2009.CC42.1	Girl's Hockey in City-Owned Arenas
2009.CD25.3	Per Diem Rate for Child Care Operators
2010.CD29.1	Implementation of Early Learning Program and Toronto's Child Care Funding Risks and Pressures

2010.CD34.4	Implementing Early Learning: Status Report
2011.CD8.1	Transitional policies Impacting Toronto's Child Care System and Recommended Actions for Mitigation
2012.CD16.2	Introducing a Middle Childhood Strategy for the City of Toronto
2012.MM19.3	New Children and Youth Permit Fees for Sports Fields - by Councillor Sarah Doucette, seconded by Councillor Paula Fletcher
2012.MM26.27	International Day of the Girl, October 11, 2012 - by Councillor Pam McConnell, seconded by Councillor Kristyn Wong-Tam
2013.CD18.3	Schools-First Child Care Capital Retrofit Policy Implementation
2013.CD22.3	Full-Day Kindergarten Implementation Status Update
2013.CD22.4	First Phase of Schools First Child Care Capital Retrofit Policy Implementation
2013.CD22.5	Toronto Child Care Funding Model
2013.CD23.2	Expanding the Application of Operating Criteria for Child Care
2013.CD25.3	Full-Day Kindergarten Implementation Updates 2013
2013.MM36.20	Authorization to Release Section 37 Funds to the YWCA 1st Stop Woodlawn Shelter for Capital Renewal of the Outdoor Green Space - by Councillor Josh Matlow, seconded by Councillor Ana Bailo
2013.MM39.30	International Day of the Girl Child, October 11th - by Councillor Joe Mihevc, seconded by Councillor Shelley Carroll
2014.CD26.4	Measuring the Impacts of Child Care Fee Subsidies
2014.CD29.1	Feasibility of 24-Hour Drop-in Service for Women
2014.CD29.2	City Support for the Red Door Shelter
2014.CD29.5	Schools-First Child Care Capital Retrofit - Updates Phase 2 and 3

2014.ED30.3	Women's Entrepreneurship Roundtable
2014.EX42.17	New Transitional Housing for Young Victims of Sexual Exploitation and Human Trafficking
2014.MM52.2	Transforming the Child Care Centre Quality Rating System - by Councillor Gary Crawford, seconded by Councillor Paula Fletcher
2015.CD3.3	Toronto Children's Services 2015-2019 Service Plan
2015.CD4.5	Toronto Child Care Funding Model
2015.EX5.12	Securing a Future for the Red Door Shelter
2015.EX7.17	Under One Roof - A Housing Solution for Women and Children at 389 Church Street
2015.HL8.1	Action on Intimate Partner Violence against Women
2015.MM3.27	Child Care 2020: Call for a National Child Care Plan - by Councillor Janet Davis, seconded by Councillor Paula Fletcher
2015.MM9.47	"Free Yourself" Global Domestic Violence Campaign - by Councillor Ana Bailo
2015.MM9.6	Honouring the Contribution of Canadian Women - by Councillor Mary Fragedakis, seconded by Councillor Sarah Doucette
2016.CD11.3	Child Care Capital Expansion Update
2016.CD11.4	Response to Proposed Regulations under the Child Care and Early Years Act, 2014 and the Education Act
2016.CD14.15	Full Day Kindergarten and Before-and-After-School Program Implementation
2016.MM17.7	Support for Bill 158, Saving the Girl Next Door Act - by Councillor Paul Ainslie, seconded by Councillor Mike Layton

2017.CD19.2	Toronto's Child Care Growth Strategy
2017.CD21.10	Child Care and Early Years Act and Education Act Next Steps for Middle Childhood Programs
2017.MM27.24	Gender Diversity in City Procurements - by Councillor Michelle Holland, seconded by Councillor Mary Fragedakis
2017.MM27.48	Canada Child Benefit and National Child Care System - by Councillor Paul Ainslie, seconded by Councillor Janet Davis
2017.MM32.1	Exempting the North York Women's Shelter from Planning Application Fees, specifically Site Plan - by Councillor James Pasternak, seconded by Councillor Josh Matlow