9 Appendix

9.1 Detailed coding decisions about the dependent variable and the unit of analysis

We made several coding decisions when merging the Infrastructure Canada data with the list of municipalities to extract the exact location of projects. First, after a redistricting in 2013, the number of federal districts increased from 308 to 338 at the 2015 election. Consequently, all projects funded from 2016 onward are associated to the 2013 redistricting, while those approved before are associated to the 2003 electoral map. Second, some projects allocated to Aboriginal communities and to regional public transit systems were excluded because Elections Canada does not associate these recipients to federal electoral districts. Third, some municipalities encompass many electoral districts: large cities like Montreal cover dozens of districts, but even some smaller towns cover two districts. Unfortunately, we had to eliminate infrastructure projects that were allocated to a municipality covering more than one riding because we cannot distinguish where the project is located in the municipality. This decision eliminates most of the urban districts in our data. Fourth, some districts incorporate a large urban municipality, excluded from our dataset, but also house smaller municipalities included in our dataset. This is sometimes the case for suburban ridings or for independent towns within a larger urban area. Since projects allocated to the large municipality are excluded from the dataset, these particular districts receive an artificially low number of projects, because only those allocated to the smaller town are included in our dataset. To address this issue, we measure the proportion of municipalities in a riding that are present in more than one electoral district against the total number of municipalities in a riding. Ridings with a high proportion of municipalities present in multiple ridings are mostly urban and suburban ridings, suffering from this artificial downward bias in project allocation. Consequently, we chose to eliminate all ridings having 25% and more of their municipalities present in more than one riding, which is roughly half the ridings. For example, the Montreal riding of Notre-Dame-de-Grâce-Westmount includes Westmount, an independent city, and Notre-Dame-de-Grâce, a borough of the city of Montreal. The riding of Notre-Dame-de-Grâce-Westmount was present in our original dataset but includes only projects allocated to the city of Westmount, but excludes those for Notre-Dame-de-Grâce, because they are allocated to the city of Montreal in the dataset of Infrastructure Canada. The result is that the number of projects allocated to riding of Notre-Dame-de-Grâce-Westmount and other similar ridings is artificially lower than for districts where no beneficiary is excluded from the dataset. We took the date of the project to classify projects instead of the start date of construction for three reasons: governments should have more influence on the choice of

the date than the construction date, we assume that announcements will be made public when the project is approved and this choice helps to increase the number of cases as many recent projects have not started yet. Finally, we did not consider by-elections. However, there are very few by-elections which resulted in a shift from government to opposition or vice versa.

Regarding the unit of analysis, there are several reasons supporting the decision of analyzing legislatures instead of annual data. First, our hypotheses pertain to cross-sectional comparisons of ridings while we do not have specific predictions about the dynamic process that might influence our dependent variable over time.[1] Second, legislature data has the advantage of removing serial correlation in our dependent variable which might have biased the standard errors of the coefficients. Finally, our main independent variables do not vary within legislatures but only at election time which mostly prevents us of examining the impact of short-term changes in these variables on our dependent variable. Consequently, both theoretical expectations and empirical reasons support our decision to analyze data at the legislature level.

9.2 Share of Infrastructure Spending in Federal and Discretionary Spending

Based on the Parliamentary Budget Officers calculation, we estimate that infrastructure spending represents 3.6% of total program expenditures of the government in 2017-2018. We rely on PBO calculations because it is difficult to measure total federal infrastructure spending scattered across different departments (which includes building maintenance and other spending not included in the Infrastructure Canada programs). We were able to extract total spending by Infrastructure Canada from 2010 to 2018. On average over the period, we estimate that Infrastructure Canada spending represents 1.39% of federal program expenditures.

The calculation of federal discretionary spending is more complex as no measure currently exists. The concept comes from the United States where discretionary spending represents appropriations that Congress has to vote on every year, in contrast to entitlements that are prolonged indefinitely unless changed by law. It is more complex to calculate discretionary spending in Canada since "appropriations" do not exist. We use the logic of Streeck and Mertens' measure (2011) of discretionary spending in Germany. To get an estimate measure of discretionary spending we subtract transfers to individuals and to provinces (entitlements), defense spending and all federal government personnel expenditures from total federal program expenditures. These are all mandatory spending that cannot be reduced quickly. We are left with $30 billion of discre-

[1] We acknowledge that infrastructure projects could be subject to an electoral cycle effect. This is an important issue that might be considered in future work.

tionary spending in recent budgets, for about $10 billion total infrastructure spending during these years, which represents 33%.

9.3 Distributive politics in the funding allocated to infrastructure projects?

FIGURE A1: The predicted amount of funding across margin of victory and government/opposition districts (from column 3 of Table 2)

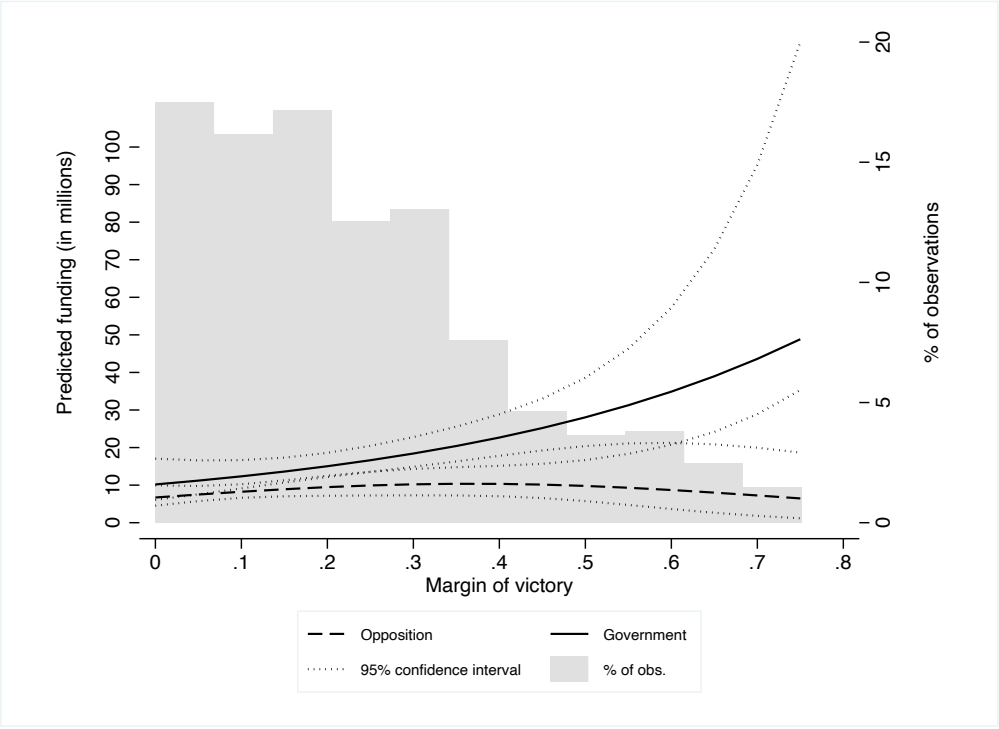


FIGURE A2: The average marginal effects of government on funding across margin of victory (from column 4 of Table 2)

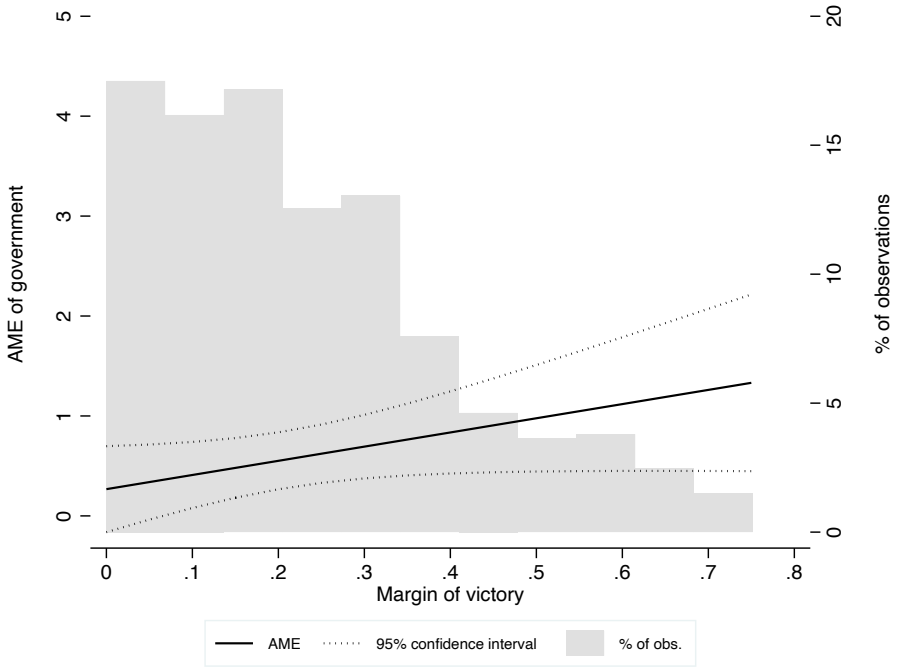


TABLE A1: Predicting the amount of funding allocated to ridings (full results of Table 2)

	(1) Govt. (RE)	(2) Govt. (FE)	(3) Core/Swing (RE)	(4) Core/Swing (RE)	(5) Core/Swing (FE)
Government	0.68 (0.13)***	0.74 (0.17)***	0.42 (0.30)	0.27 (0.22)	0.23 (0.29)
Cabinet minister	-0.39 (0.24)	-0.28 (0.29)	-0.36 (0.24)	-0.37 (0.24)	-0.26 (0.29)
Margin			2.37 (2.00)	0.71 (0.70)	-1.11 (0.96)
Margin X Margin			-3.22 (3.61)		
Govt. X Margin			-0.47 (2.45)	1.42 (0.79)*	2.58 (1.05)**
Govt. X Margin X Marg.			3.48 (4.11)		
Incumbency length	0.07 (0.04)*	-0.04 (0.06)	0.04 (0.04)	0.04 (0.04)	-0.05 (0.06)
Province government	-0.10 (0.15)	0.29 (0.21)	-0.13 (0.15)	-0.11 (0.15)	0.21 (0.20)
Employment rate	-0.04 (0.02)*	-0.18 (0.08)**	-0.05 (0.02)**	-0.05 (0.02)**	-0.21 (0.07)***
Population	-0.01 (0.01)	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)
Δ population	0.00 (0.02)	0.04 (0.04)	0.00 (0.02)	0.01 (0.02)	0.05 (0.04)
Median income	0.02 (0.04)	0.16 (0.08)**	0.03 (0.04)	0.04 (0.04)	0.19 (0.08)**
% no degree	0.01 (0.02)	-0.15 (0.05)***	0.01 (0.02)	0.01 (0.02)	-0.14 (0.05)***
Pop. density	-0.26 (0.17)	-0.25 (0.29)	-0.29 (0.16)*	-0.30 (0.16)*	-0.28 (0.28)
BC	-0.13 (0.32)		0.40 (0.40)	0.48 (0.37)	
Manitoba	-0.61 (0.49)		-0.30 (0.51)	-0.20 (0.50)	
New Brunswick	-1.47 (0.52)***		-0.89 (0.53)*	-0.81 (0.53)	
Nova Scotia	-0.68 (0.46)		-0.13 (0.58)	-0.05 (0.55)	
Nunavut	1.13 (0.74)		1.72 (0.78)**	1.79 (0.78)**	
Ontario	-0.95 (0.28)***		-0.40 (0.37)	-0.31 (0.34)	
Quebec	-0.87 (0.28)***		-0.37 (0.36)	-0.26 (0.34)	
Saskatchewan	-1.10 (0.38)***		-0.49 (0.44)	-0.43 (0.42)	
NL	-1.11 (0.50)**		-0.87 (0.51)*	-0.80 (0.51)	
NT	0.09 (1.02)		0.70 (1.01)	0.77 (1.01)	
Yukon	-0.03 (0.59)		0.65 (0.63)	0.74 (0.64)	
PE	-0.39 (0.70)		0.24 (0.73)	0.34 (0.72)	
2008	1.66 (0.13)***	1.74 (0.14)***	1.63 (0.13)***	1.62 (0.13)***	1.73 (0.14)***
2011	-0.74 (0.31)**	-1.61 (0.50)***	-0.83 (0.32)***	-0.85 (0.32)***	-1.81 (0.50)***
2015	1.00 (0.44)**	-2.66 (1.02)**	0.93 (0.44)**	0.90 (0.43)**	-2.82 (1.05)***
Constant	17.40 (1.57)***	25.91 (4.38)***	17.05 (1.57)***	17.06 (1.56)***	26.87 (4.26)***
Observations	591	527	591	591	527
# of ridings	215	152	215	215	152
R-squared within	0.40	0.44	0.41	0.40	0.45
R-squared overall	0.34	0.12	0.36	0.36	0.14
R-squared between	0.24	0.00	0.26	0.26	0.00
Sigma u	0.58	1.55	0.58	0.57	1.53
Sigma e	1.35	1.35	1.34	1.34	1.34
rho	0.16	0.57	0.16	0.15	0.57

Clustered standard errors in parantheses. *p<0.10, **p<0.05, ***p<0.01.

TABLE A2: Predicting the amount of funding allocated to ridings (square root)

	(1) Govt. (RE)	(2) Govt. (FE)	(3) Core/Swing (RE)
Government	963.98 (199.20)***	130.79 (420.79)	148.43 (277.47)
Cabinet minister	-25.26 (252.75)	39.47 (262.73)	22.30 (260.02)
Margin		1591.99 (2544.95)	382.95 (1001.47)
Margin X Margin		-2635.19 (4825.82)	
Govt. X Margin		3015.92 (3875.45)	3135.92 (1419.96)**
Govt. X Margin X Margin		604.30 (5942.87)	
Incumbency length	-7.86 (56.80)	-52.91 (60.86)	-54.86 (63.16)
Province government	-530.81 (262.63)**	-595.32 (275.32)**	-592.50 (277.74)**
Employment rate	-58.13 (33.81)*	-81.37 (33.61)**	-82.44 (33.84)**
Population	-0.44 (7.87)	1.35 (7.80)	1.27 (7.80)
Δ population	-14.30 (23.94)	-4.39 (21.41)	-4.41 (21.56)
Median income	68.46 (84.22)	99.60 (86.99)	102.10 (86.47)
% no degree	-23.58 (49.39)	-17.44 (49.89)	-18.09 (49.75)
Pop. density	-238.29 (212.11)	-292.47 (208.46)	-293.19 (207.24)
BC	102.35 (717.02)	735.69 (814.50)	963.17 (752.65)
Manitoba	312.69 (1233.83)	661.45 (1199.65)	892.60 (1267.74)
New Brunswick	-1259.45 (692.71)*	-471.36 (776.65)	-248.65 (780.94)
Nova Scotia	-255.12 (729.79)	470.96 (903.96)	684.79 (887.98)
Nunavut	5818.20 (1022.02)***	6428.10 (1066.83)***	6686.87 (1101.07)***
Ontario	-1211.13 (472.82)**	-532.30 (635.64)	-303.01 (562.24)
Quebec	-708.55 (511.45)	-38.10 (656.32)	196.92 (622.48)
Saskatchewan	-784.74 (565.32)	53.27 (660.40)	263.96 (680.29)
NL	-282.78 (654.12)	-57.04 (764.23)	81.78 (747.29)
NT	3859.56 (3217.67)	4529.63 (3205.64)	4744.08 (3194.11)
Yukon	5102.81 (793.10)***	6075.10 (930.76)***	6288.89 (931.92)***
PE	182.77 (1020.67)	1060.27 (1090.74)	1298.85 (1118.30)
2008	2209.05 (179.27)***	2149.13 (175.13)***	2149.25 (174.16)***
2011	-707.88 (430.70)	-946.26 (457.45)**	-955.48 (454.50)**
2015	1037.49 (717.84)	894.48 (666.89)	841.77 (680.40)
Constant	5046.20 (3220.28)	4699.86 (3157.98)	4600.61 (3176.48)
Observations	606	606	606
# of ridings	215.00	215.00	215.00
R-squared within	0.39	0.41	0.41
R-squared overall	0.33	0.35	0.35
R-squared between	0.27	0.28	0.27
Sigma u	1386.14	1397.44	1396.94
Sigma e	1701.00	1680.11	1675.96
rho	0.40	0.41	0.41

Clustered standard errors in parantheses. *p<0.10, **p<0.05, ***p<0.01.

FIGURE A3: The predicted amount of funding across margin of victory and government/opposition districts (square root)

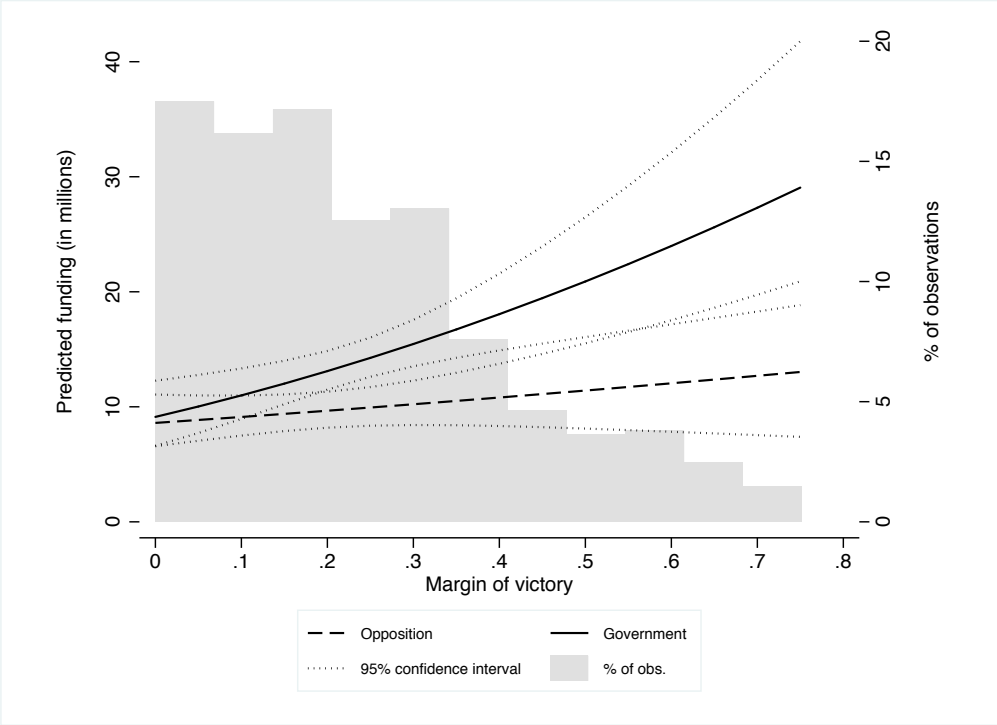


TABLE A3: Predicting the amount of funding allocated to ridings, in million (no transformation)

	(1) Govt. (RE)	(2) Govt. (FE)	(3) Core/Swing (RE)
Government	10.05 (4.18)**	-5.22 (6.36)	-1.90 (3.49)
Cabinet minister	1.34 (3.05)	2.28 (3.23)	1.85 (3.19)
Margin		-0.50 (39.14)	-9.45 (14.38)
Margin X Margin		-25.70 (67.74)	
Govt. X Margin		83.04 (70.11)	51.77 (24.58)**
Govt. X Margin X Margin		-45.88 (90.47)	
Incumbency length	-0.98 (0.89)	-1.44 (1.01)	-1.49 (1.06)
Province government	-10.24 (4.39)**	-11.77 (4.94)**	-11.95 (5.06)**
Employment rate	-0.49 (0.47)	-0.81 (0.51)	-0.85 (0.53)
Population	0.04 (0.11)	0.06 (0.11)	0.06 (0.11)
Δ population	-0.49 (0.33)	-0.36 (0.30)	-0.37 (0.30)
Median income	0.85 (1.56)	1.39 (1.70)	1.46 (1.71)
% no degree	-0.56 (1.02)	-0.46 (1.06)	-0.49 (1.06)
Pop. density	-2.64 (2.51)	-3.33 (2.47)	-3.30 (2.47)
BC	4.28 (11.64)	7.33 (13.08)	12.88 (12.45)
Manitoba	15.04 (21.21)	15.40 (19.80)	20.76 (21.72)
New Brunswick	-7.21 (10.23)	-1.65 (11.71)	3.77 (12.44)
Nova Scotia	0.64 (10.00)	5.72 (11.89)	10.89 (12.60)
Nunavut	110.45 (16.47)***	112.03 (16.39)***	118.84 (18.00)***
Ontario	-10.55 (7.03)	-7.56 (9.21)	-1.98 (8.38)
Quebec	-2.38 (8.39)	1.70 (10.26)	7.01 (10.54)
Saskatchewan	-2.53 (8.52)	3.95 (9.90)	9.31 (11.46)
NL	5.11 (8.45)	6.44 (10.29)	9.42 (10.35)
NT	74.41 (60.33)	75.78 (60.37)	81.09 (60.27)
Yukon	123.82 (11.59)***	131.44 (13.91)***	136.37 (14.45)***
PE	4.28 (17.80)	10.75 (19.13)	16.32 (20.30)
2008	16.18 (2.05)***	15.52 (1.91)***	15.67 (1.93)***
2011	-4.24 (7.29)	-8.20 (8.25)	-8.31 (8.21)
2015	10.12 (10.16)	7.51 (9.19)	6.48 (9.67)
Constant	28.74 (60.78)	29.73 (60.68)	26.54 (61.29)
Observations	606	606	606
# of ridings	215.00	215.00	215.00
R-squared within	0.17	0.20	0.20
R-squared overall	0.26	0.28	0.28
R-squared between	0.31	0.31	0.30
Sigma u	17.98	18.38	18.39
Sigma e	26.53	26.16	26.13
rho	0.31	0.33	0.33

Clustered standard errors in parantheses. *p<0.10, **p<0.05, ***p<0.01.

FIGURE A4: The predicted amount of funding across margin of victory and government/opposition districts (from column 3 of Table A3 - this is similar to Figure 2)

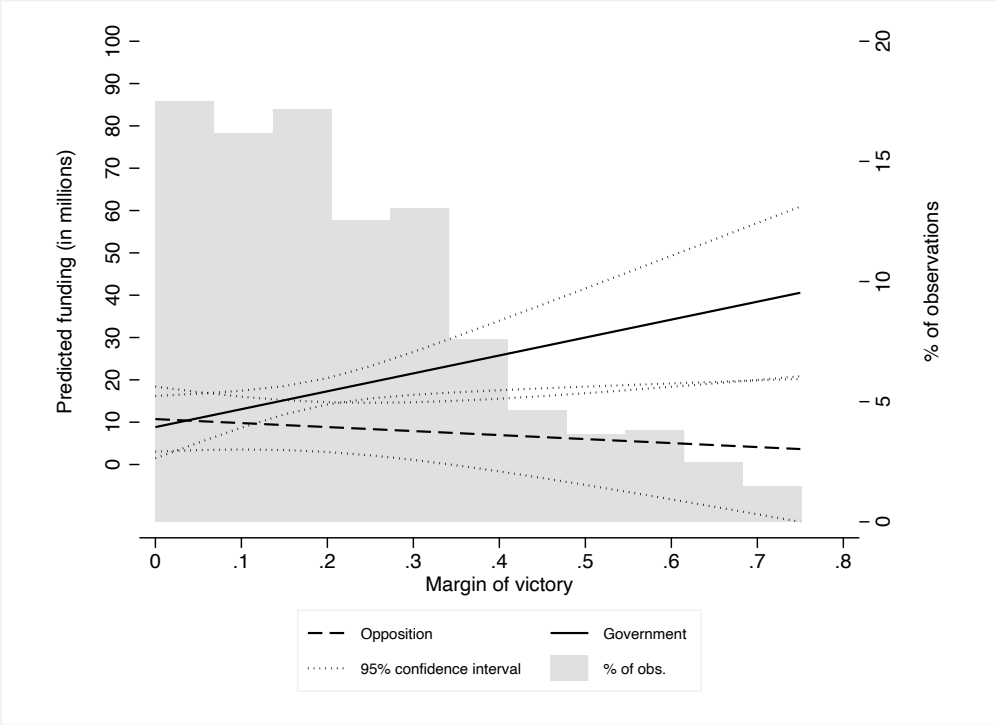


TABLE A4: Predicting the amount of funding allocated to ridings (fixed-effects)

	(1) Govt.	(2) Core/Swing	(3) Core/Swing
Government	0.74 (0.17)***	0.45 (0.40)	0.23 (0.29)
Cabinet minister	-0.28 (0.29)	-0.25 (0.30)	-0.26 (0.29)
Margin		1.60 (2.80)	-1.11 (0.96)
Margin X Margin		-5.61 (5.05)	
Govt. X Margin		-0.59 (3.38)	2.58 (1.05)**
Govt. X Margin X Margin		6.40 (6.12)	
Incumbency length	-0.04 (0.06)	-0.05 (0.06)	-0.05 (0.06)
Province government	0.29 (0.21)	0.20 (0.20)	0.21 (0.20)
Employment rate	-0.18 (0.08)**	-0.21 (0.07)***	-0.21 (0.07)***
Population	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)
Δ population	0.04 (0.04)	0.05 (0.04)	0.05 (0.04)
Median income	0.16 (0.08)**	0.19 (0.08)**	0.19 (0.08)**
% no degree	-0.15 (0.05)***	-0.14 (0.05)***	-0.14 (0.05)***
Pop. density	-0.25 (0.29)	-0.27 (0.29)	-0.28 (0.28)
2008	1.74 (0.14)***	1.74 (0.14)***	1.73 (0.14)***
2011	-1.61 (0.50)***	-1.81 (0.51)***	-1.81 (0.50)***
2015	-2.66 (1.02)**	-2.80 (1.04)***	-2.82 (1.05)***
Constant	25.91 (4.38)***	26.88 (4.26)***	26.87 (4.26)***
Observations	527	527	527
# of ridings	152.00	152.00	152.00
R-squared within	0.44	0.45	0.45
R-squared overall	0.12	0.14	0.14
Sigma u	1.55	1.53	1.53
Sigma e	1.35	1.34	1.34
rho	0.57	0.56	0.57

Clustered standard errors in parantheses. *p<0.10, **p<0.05, ***p<0.01.

FIGURE A5: The predicted amount of funding across margin of victory and government/opposition districts (from column 3 of Table A4 - this is similar to Figure 2)

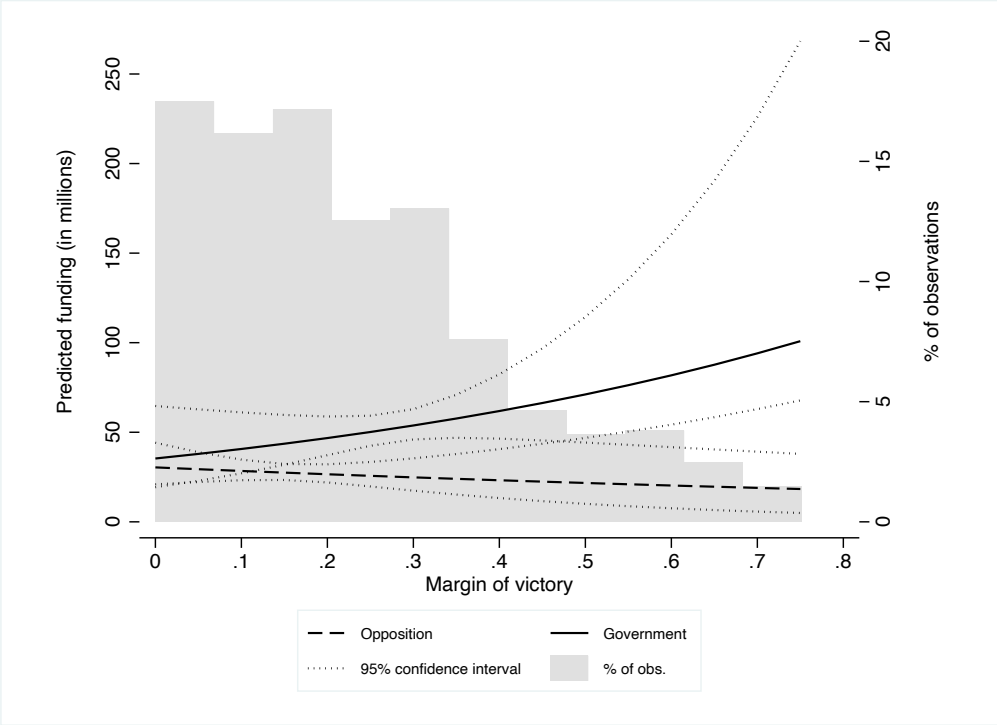
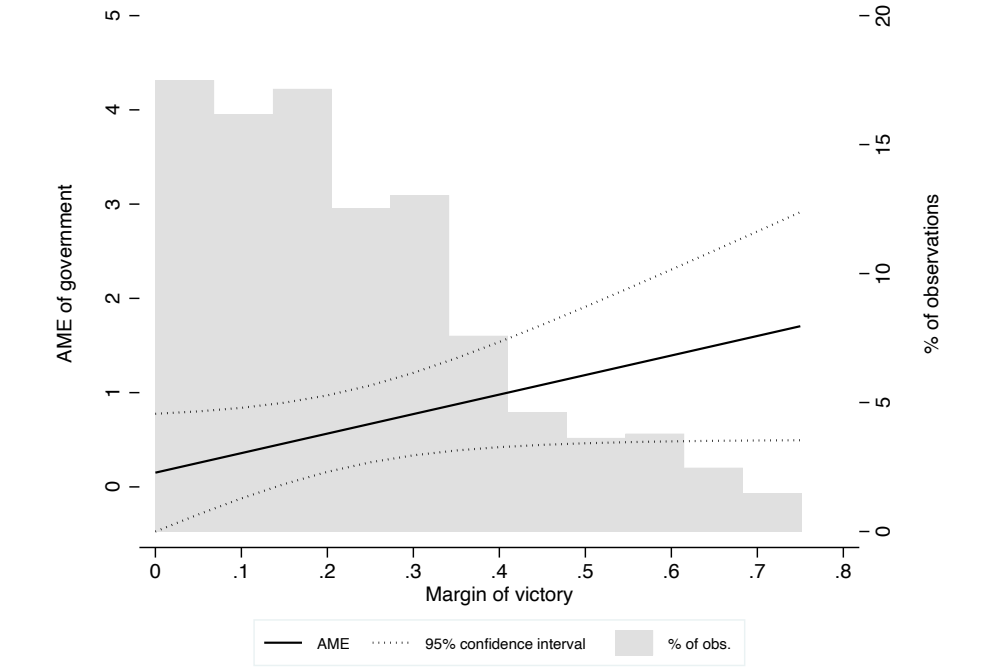


FIGURE A6: The average marginal effects of government on funding across margin of victory (from column 3 of Table A4 - this is similar to Figure A2)



Controls for investments and remaining infrastructure useful life

Infrastructure Canada provides the average age and remaining useful life of infrastructure across Canadian provinces and between 2009 and 2019. Based on data from Statistics Canada, it is also possible to account for all provincial, municipal and private investments in infrastructure across Canadian provinces (as a percentage of province GDP). In theory, the more the private sector spends on infrastructure projects, the less public investment is needed as a substitute, while the average remaining useful life is a proxy for direct needs of infrastructure. Moreover, the government of Canada's decision to invest should also be affected by provincial and municipal spending decisions. Since these variables are only available at the provincial level and considerably reduce our sample size by at least 25%, we only include them in the appendix and not in the main models. The results below in Table A5 support those presented in the main manuscript with respect to the government hypothesis. However, these results do not suggest that core government districts are as advantaged in funding than those in our main results.

TABLE A5: Predicting the amount of funding allocated to ridings (controls investments and remaining infra. age)

	(1) Govt. (RE)	(2) Core/Swing (RE)	(3) Core/Swing (RE)
Government	0.37 (0.15)**	0.43 (0.32)	0.10 (0.24)
Cabinet minister	-0.39 (0.28)	-0.38 (0.28)	-0.37 (0.27)
Margin		2.16 (2.14)	0.48 (0.78)
Margin X Margin		-2.75 (3.73)	
Govt. X Margin		-2.66 (2.69)	0.83 (0.89)
Govt. X Margin X Margin		5.72 (4.40)	
Incumbency length	0.06 (0.04)	0.04 (0.04)	0.04 (0.04)
Province government	0.42 (0.27)	0.33 (0.27)	0.38 (0.27)
Employment rate	-0.02 (0.02)	-0.03 (0.03)	-0.03 (0.02)
Population	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Δ population	-0.02 (0.02)	-0.02 (0.02)	-0.02 (0.02)
Median income	0.01 (0.05)	0.02 (0.05)	0.02 (0.05)
% no degree	0.00 (0.02)	0.00 (0.02)	0.00 (0.02)
Pop. density	-0.21 (0.14)	-0.23 (0.14)	-0.23 (0.14)*
Private investment	-0.86 (0.45)*	-0.87 (0.44)**	-0.82 (0.46)*
Provincial investment	0.60 (0.49)	0.37 (0.49)	0.49 (0.47)
Municipal investment	3.45 (1.09)***	3.20 (1.12)***	3.25 (1.12)***
Remaining infra. life	0.17 (0.08)**	0.13 (0.09)	0.14 (0.08)*
BC	1.60 (0.76)**	1.76 (0.74)**	1.76 (0.75)**
Manitoba	3.50 (1.07)***	3.40 (1.06)***	3.39 (1.08)***
New Brunswick	0.28 (0.75)	0.64 (0.74)	0.50 (0.74)
Nova Scotia	2.76 (0.96)***	2.74 (0.96)***	2.73 (0.96)***
Ontario	0.77 (0.88)	0.97 (0.85)	0.97 (0.88)
Quebec	0.06 (0.59)	0.27 (0.59)	0.27 (0.59)
Saskatchewan	1.00 (0.66)	1.25 (0.66)*	1.19 (0.66)*
NL	2.74 (0.93)***	2.22 (1.00)**	2.33 (0.96)**
PE	2.87 (1.10)***	3.04 (1.08)***	3.00 (1.11)***
2011	-1.44 (0.39)***	-1.52 (0.41)***	-1.51 (0.40)***
2015	-0.15 (0.56)	-0.19 (0.57)	-0.16 (0.56)
Constant	3.55 (4.54)	6.56 (4.84)	5.84 (4.59)
Observations	430	430	430
# of ridings	211.00	211.00	211.00
R-squared within	0.51	0.52	0.51
R-squared overall	0.38	0.39	0.39
R-squared between	0.20	0.21	0.22
Sigma u	0.65	0.64	0.62
Sigma e	1.25	1.25	1.26
rho	0.21	0.21	0.19

Clustered standard errors in parantheses. *p<0.10, **p<0.05, ***p<0.01.

TABLE A6: Predicting the amount of funding allocated to ridings (LDV)

	(1) Govt. (RE)	(2) Core/Swing (RE)	(3) Core/Swing (RE)
Government	0.46 (0.16)***	0.31 (0.42)	0.17 (0.31)
Cabinet minister	-0.52 (0.29)*	-0.49 (0.29)*	-0.49 (0.28)*
Margin		2.01 (2.90)	1.19 (0.91)
Margin X Margin		-1.55 (5.47)	
Govt. X Margin		-0.87 (3.68)	0.70 (1.15)
Govt. X Margin X Margin		2.88 (6.85)	
Incumbency length	0.03 (0.05)	-0.00 (0.05)	-0.00 (0.05)
Province government	0.09 (0.24)	0.10 (0.22)	0.12 (0.23)
Employment rate	-0.03 (0.03)	-0.04 (0.03)	-0.04 (0.03)
Population	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)
Δ population	0.00 (0.02)	0.01 (0.02)	0.01 (0.02)
Median income	0.06 (0.06)	0.06 (0.06)	0.06 (0.06)
% no degree	0.00 (0.02)	-0.00 (0.02)	-0.00 (0.02)
Pop. density	-0.19 (0.13)	-0.24 (0.13)*	-0.23 (0.13)*
BC	-0.31 (0.36)	0.39 (0.52)	0.28 (0.42)
Manitoba	-0.29 (0.54)	0.12 (0.61)	0.04 (0.57)
New Brunswick	-1.42 (0.61)**	-0.77 (0.66)	-0.87 (0.63)
Nova Scotia	-0.70 (0.61)	-0.05 (0.79)	-0.14 (0.72)
Nunavut	1.40 (0.80)*	2.27 (0.93)**	2.13 (0.86)**
Ontario	-0.84 (0.36)**	-0.11 (0.51)	-0.22 (0.43)
Quebec	-1.16 (0.37)***	-0.50 (0.50)	-0.58 (0.43)
Saskatchewan	-1.17 (0.41)***	-0.48 (0.56)	-0.59 (0.47)
NL	-1.30 (0.66)**	-0.85 (0.76)	-0.96 (0.68)
NT	-2.49 (0.89)***	-1.39 (1.01)	-1.53 (0.94)
Yukon	-0.92 (0.61)	-0.03 (0.74)	-0.13 (0.70)
PE	-0.40 (0.70)	0.32 (0.78)	0.23 (0.75)
2011	-2.66 (0.38)***	-2.60 (0.38)***	-2.61 (0.38)***
2015	-0.97 (0.57)*	-0.95 (0.57)*	-0.97 (0.57)*
L.ln_money	0.05 (0.06)	0.03 (0.06)	0.03 (0.06)
Constant	17.59 (2.18)***	17.60 (2.24)***	17.70 (2.19)***
Observations	366	366	366
# of ridings	152.00	152.00	152.00
R-squared within	0.45	0.46	0.46
R-squared overall	0.42	0.43	0.43
R-squared between	0.42	0.42	0.43
Sigma u	0.09	0.11	0.11
Sigma e	1.29	1.29	1.29
rho	0.01	0.01	0.01

Clustered standard errors in parantheses. *p<0.10, **p<0.05, ***p<0.01.

9.4 Harper governments

TABLE A7: Predicting the number of projects allocated to ridings (Harper governments)

	(1) Government	(2) Core/Swing
Government	0.23 (0.11)**	-0.00 (0.14)
Cabinet minister	-0.06 (0.12)	-0.04 (0.12)
Margin		0.54 (0.42)
Govt. X Margin		0.94 (0.58)
Incumbency length	0.00 (0.02)	-0.02 (0.02)
Province government	-0.03 (0.15)	-0.05 (0.15)
Employment rate	-0.01 (0.01)	-0.03 (0.01)**
Population	-0.00 (0.00)	-0.01 (0.00)
Δ population	-0.00 (0.01)	0.00 (0.01)
Median income	-0.05 (0.03)*	-0.03 (0.03)
% no degree	0.01 (0.01)	0.01 (0.01)
Pop. density	-0.10 (0.04)***	-0.12 (0.04)***
BC	-0.24 (0.20)	0.25 (0.23)
Manitoba	-0.66 (0.30)**	-0.39 (0.28)
New Brunswick	-0.99 (0.26)***	-0.51 (0.28)*
Nova Scotia	-0.56 (0.22)**	0.04 (0.29)
Nunavut	-1.63 (0.46)***	-1.17 (0.44)***
Ontario	-0.05 (0.22)	0.44 (0.22)**
Quebec	-0.55 (0.22)**	-0.06 (0.25)
Saskatchewan	-0.40 (0.21)*	0.10 (0.23)
NL	-0.62 (0.32)**	-0.21 (0.32)
NT	0.71 (0.38)*	1.22 (0.37)***
Yukon	-0.01 (0.30)	0.58 (0.34)*
PE	-0.32 (0.36)	0.27 (0.39)
2008	1.03 (0.06)***	1.00 (0.06)***
2011	-0.52 (0.15)***	-0.66 (0.16)***
Constant	4.47 (0.85)***	4.36 (0.83)***
Observations	457	457
Alpha	0.26	0.24
Log likelihood	-1385.05	-1374.69

Clustered standard errors in parantheses. *p<0.10, **p<0.05, ***p<0.01.

FIGURE A7: The predicted # of projects across margin of victory and government/opposition districts (from column 2 of Table A7 - this is similar to Figure A9)

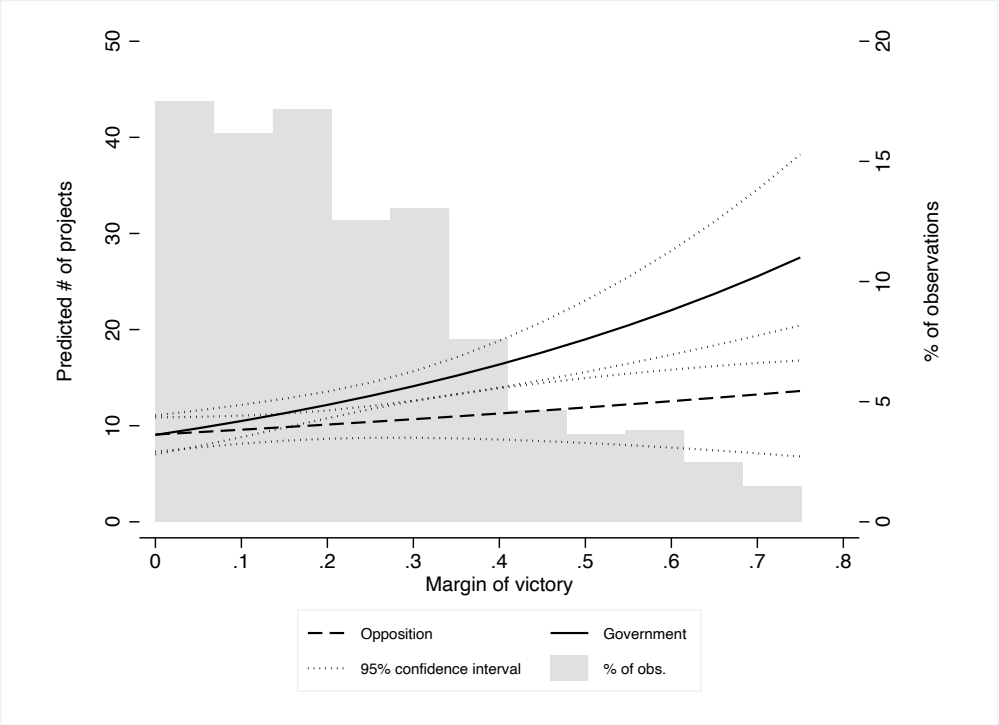


FIGURE A8: The predicted amount of funding across margin of victory and government/opposition districts (from column 2 of Table A8 - this is similar to Figure 2)

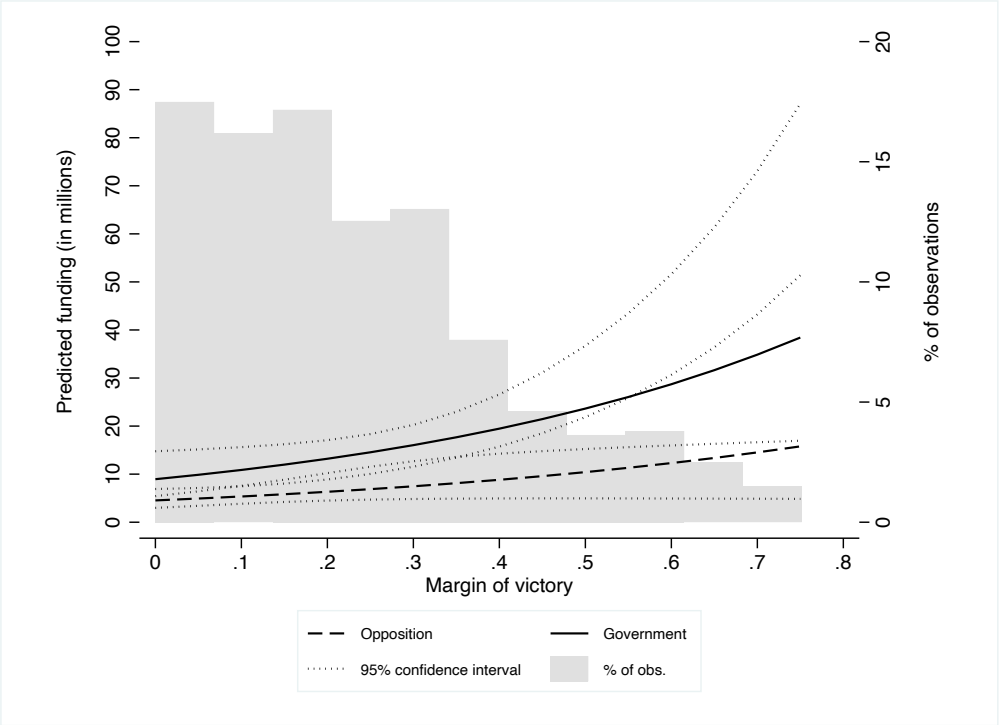


TABLE A8: Predicting the amount of funding allocated to ridings (Harper governments)

	(1) Government	(2) Core/Swing
Government	0.83 (0.24)***	0.68 (0.31)**
Cabinet minister	-0.52 (0.27)*	-0.48 (0.27)*
Margin		1.66 (0.96)*
Govt. X Margin		0.28 (1.21)
Incumbency length	0.10 (0.05)*	0.06 (0.06)
Province government	0.48 (0.28)*	0.43 (0.28)
Employment rate	-0.05 (0.03)*	-0.07 (0.03)**
Population	-0.01 (0.01)	-0.01 (0.01)
Δ population	0.00 (0.02)	0.01 (0.02)
Median income	0.03 (0.07)	0.04 (0.07)
% no degree	0.00 (0.02)	0.00 (0.02)
Pop. density	-0.20 (0.13)	-0.23 (0.12)*
BC	-0.60 (0.33)*	0.06 (0.42)
Manitoba	-0.66 (0.56)	-0.33 (0.55)
New Brunswick	-1.58 (0.67)**	-0.98 (0.68)
Nova Scotia	-0.77 (0.52)	-0.07 (0.62)
Nunavut	0.90 (0.97)	1.59 (0.97)
Ontario	-0.61 (0.40)	0.01 (0.46)
Quebec	-0.67 (0.43)	-0.10 (0.50)
Saskatchewan	-1.56 (0.44)***	-0.87 (0.51)*
NL	-1.89 (0.63)***	-1.39 (0.66)**
NT	-0.62 (0.95)	0.22 (0.97)
Yukon	-1.42 (0.72)**	-0.56 (0.80)
PE	-0.31 (0.89)	0.46 (0.92)
2008	1.59 (0.14)***	1.55 (0.14)***
2011	-0.90 (0.41)**	-0.99 (0.42)**
2015	0.00 (.)	0.00 (.)
Constant	18.39 (1.90)***	18.20 (1.91)***
Observations	442	442
# of ridings	153.00	153.00
R-squared within	0.42	0.43
R-squared overall	0.37	0.38
R-squared between	0.27	0.29
Sigma u	0.52	0.50
Sigma e	1.38	1.38
rho	0.12	0.12

Clustered standard errors in parantheses. *p<0.10, **p<0.05, ***p<0.01.

9.5 Trudeau governments

TABLE A9: Predicting the number of projects allocated to ridings (Trudeau government)

	(1) Government	(2) Core/Swing
Government	-0.14 (0.15)	-0.11 (0.18)
Cabinet minister	-0.34 (0.11)***	-0.39 (0.13)***
Margin		1.43 (0.75)*
Govt. X Margin		-0.76 (0.92)
Incumbency length	0.04 (0.02)	0.02 (0.03)
Employment rate	-0.00 (0.02)	-0.01 (0.02)
Population	-0.00 (0.00)	-0.00 (0.00)
Δ population	-0.01 (0.01)	-0.00 (0.01)
Median income	-0.05 (0.02)**	-0.04 (0.02)*
% no degree	-0.01 (0.02)	-0.01 (0.02)
Pop. density	-0.61 (0.17)***	-0.61 (0.16)***
BC	0.05 (0.26)	0.67 (0.45)
Manitoba	0.61 (0.33)*	1.18 (0.47)**
New Brunswick	0.23 (0.32)	0.88 (0.51)*
Nova Scotia	-0.04 (0.36)	0.51 (0.55)
Nunavut	1.06 (0.46)**	1.60 (0.55)***
Ontario	0.96 (0.21)***	1.64 (0.44)***
Quebec	-0.23 (0.25)	0.42 (0.46)
Saskatchewan	0.33 (0.30)	0.67 (0.34)*
NL	1.59 (0.32)***	1.89 (0.50)***
NT	2.60 (0.35)***	3.26 (0.49)***
Yukon	2.32 (0.39)***	2.93 (0.54)***
PE	0.23 (0.47)	0.86 (0.63)
2015	0.00 (.)	0.00 (.)
Constant	4.53 (1.13)***	4.14 (1.10)***
Observations	149	149
Alpha	0.19	0.18
Log likelihood	-476.72	-473.81

Robust standard errors in parantheses. *p<0.10, **p<0.05, ***p<0.01.

TABLE A10: Predicting the amount of funding allocated to ridings (Trudeau governments)

	(1) Government	(2) Core/Swing
Government	-0.08 (0.31)	-0.29 (0.36)
Cabinet minister	0.08 (0.52)	-0.06 (0.57)
Margin		0.18 (1.71)
Govt. X Margin		1.57 (2.17)
Incumbency length	-0.01 (0.06)	-0.03 (0.06)
Province government	0.00 (.)	0.00 (.)
Employment rate	0.02 (0.04)	0.03 (0.04)
Population	0.00 (0.01)	0.00 (0.01)
Δ population	-0.02 (0.02)	-0.02 (0.02)
Median income	0.02 (0.06)	0.01 (0.06)
% no degree	0.11 (0.06)*	0.11 (0.05)**
Pop. density	-0.64 (0.45)	-0.75 (0.45)*
BC	1.14 (0.77)	1.22 (1.10)
Manitoba	0.73 (1.09)	0.77 (1.30)
New Brunswick	0.19 (0.82)	0.18 (1.20)
Nova Scotia	1.08 (0.97)	0.70 (1.35)
Nunavut	2.84 (0.98)***	2.82 (1.28)**
Ontario	-0.28 (0.62)	-0.17 (1.01)
Quebec	0.15 (0.67)	0.21 (1.09)
Saskatchewan	0.59 (0.71)	0.61 (0.86)
NL	1.25 (0.71)*	0.58 (1.13)
NT	2.78 (0.80)***	2.74 (1.12)**
Yukon	4.28 (0.88)***	4.02 (1.26)***
PE	1.91 (1.26)	1.63 (1.62)
2015	0.00 (.)	0.00 (.)
Constant	12.41 (2.60)***	12.32 (2.58)***
Observations	149	149
Adjusted R^2	0.262	0.257

Robust standard errors in parantheses. *p<0.10, **p<0.05, ***p<0.01.

9.6 The influence of money on *margin of victory* and *government riding*

We present in Table A11 the results of the regression models where we examine the effect of money spent in a riding on the margin of victory at the next election (columns 1-2) and whether the riding will be held by a MP from the government (columns 3-4). Results of linear regressions are displayed in columns 1 (fixed-effects) and 2 (random-effects) while results of logistic regressions are displayed in columns 3 (fixed-effects) and 4 (random-effects). The results are the same if we exclude the 2015 election from the analyses. Results of the fixed-effects specifications are based on ridings that have more than one observation. The number of observations does not match under the linear and logistic regressions because some observations were perfectly predicted under the latter set of models (e.g. when the riding has always been represented by a MP from the government or the opposition). Overall, there is little evidence that the money spent on infrastructure projects in a riding significantly influences the margin of victory at the next election or whether the MP will be from the government party.

TABLE A11: Predicting margin of victory and government riding

	(1) Margin (FE)	(2) Margin (RE)	(3) Govt. (FE)	(4) Gov. (RE)
Log money	0.01 (0.01)	0.01 (0.00)*	0.38 (0.21)*	0.13 (0.10)
Government	0.08 (0.04)*	0.07 (0.02)***		
Cabinet minister	0.10 (0.05)*	0.01 (0.02)	0.83 (1.36)	1.51 (0.41)***
Incumbency length	0.01 (0.01)	0.01 (0.00)**	0.18 (0.21)	-0.19 (0.09)**
Province government	-0.08 (0.04)**	-0.05 (0.04)	-0.07 (0.99)	-0.83 (0.82)
Employment rate	0.05 (0.01)***	0.01 (0.00)***	1.29 (0.37)***	0.19 (0.06)***
Population	-0.00 (0.00)	0.00 (0.00)	0.01 (0.04)	-0.00 (0.01)
Δ population	-0.00 (0.01)	0.00 (0.00)	-0.26 (0.14)*	0.02 (0.04)
Median income	0.02 (0.02)	-0.00 (0.01)	-0.31 (0.48)	-0.34 (0.13)***
% no degree	0.00 (0.02)	0.00 (0.00)**	0.44 (0.37)	-0.05 (0.04)
Pop. density	-0.08 (0.08)	0.02 (0.01)**	-3.86 (3.14)	-0.01 (0.06)
2008	-0.03 (0.02)	-0.04 (0.01)***	-0.18 (0.56)	0.09 (0.25)
2011	-0.03 (0.08)	-0.05 (0.03)	3.50 (2.38)	1.03 (0.73)
BC		-0.27 (0.04)***		-0.62 (0.89)
Manitoba		-0.23 (0.06)***		-2.35 (1.24)*
New Brunswick		-0.24 (0.06)***		-0.42 (1.02)
Nova Scotia		-0.21 (0.08)***		-0.42 (1.25)
Nunavut		-0.49 (0.08)***		0.00 (.)
Ontario		-0.32 (0.06)***		-1.00 (1.12)
Quebec		-0.32 (0.06)***		-4.04 (1.15)***
Saskatchewan		-0.30 (0.06)***		-0.90 (0.87)
NL		-0.05 (0.06)		-1.05 (1.03)
NT		-0.54 (0.08)***		0.00 (.)
Yukon		-0.38 (0.07)***		-0.07 (1.21)
PE		-0.30 (0.08)***		-3.06 (1.47)**
Constant	-2.95 (0.88)***	-0.20 (0.20)		-1.42 (3.81)
Observations	250	382	159	377
# of ridings	86.00	153.00	53.00	151.00
R-squared within	0.24	0.12		
R-squared overall	0.12	0.51		
R-squared between	0.17	0.70		
Sigma u	0.29	0.05		0.01
Sigma e	0.12	0.11		
Log likelihood	239.59		-34.36	-178.16

Clustered standard errors in parantheses. *p<0.10, **p<0.05, ***p<0.01.

9.7 Distributive politics in the number of infrastructure projects?

In this section, we test our hypotheses and replicate our main results with respect to the *number of projects* allocated to federal electoral districts. This dependent variable is a count variable which only takes non-negative integer values and approximates a Poisson distribution with a high frequency of zero counts and exhibiting positive skewness. OLS regressions are not appropriate with count data given that coefficients and standard errors may be biased (Long and Freese, 2014). Poisson regression models are appropriate with count data when there is no overdispersion in the dependent variables. However, a LR test rejects the null hypothesis of no overdispersion and for this reason we use negative binomial regression models accounting for overdispersion (i.e. when the mean does not equal the variance of the dependent variable). To account for clustering at the riding level, we test two different model specifications: clustered robust standard errors and random effect model. Note that it is not possible to combine both adjustments with a negative binomial regression model as it is with linear regressions. Fortunately, the substantive results are similar under each specification.

Table A12 displays the results of the negative binomial regression models with clustered robust standard errors (CRSE).[2] In column (1), we examine the effect of being represented by a government member on the number of projects allocated to districts. The coefficient of government (0.13) is in the expected direction but the effect is only statistically significant at the 0.1 level. In substantive terms, governmental districts receive on average 1.6 more projects than opposition districts (i.e. 13.6 versus 12.0). This result provides modest support for hypothesis 1. The results in column 1 also indicate that there is no difference between cabinet ministers and non-cabinet ministers in terms of projects allocation. This is indicated by the coefficient of cabinet minister (-0.07) which is not statistically significant.

The results in column (1) do not provide strong support for hypothesis 1. The results still indicate that government districts might receive slightly more projects than opposition districts. As predicted in hypotheses 2 and 3, there is possibly some heterogeneity in the effect of *government* on project allocation as displayed in Table 2 of the main manuscript. To test such expectations, we interact the dummy variable *government* with *margin of victory* and its square. The results of this specification are displayed in column (2). It indicates that all of the coefficients of the interaction are statistically significant (except government

[2]See Table A13 for the results of the negative binomial regression models with random effects. Note that the coefficients of negative binomial regression models could not be directly interpreted as their effect on the number of projects funded as it would be the case based on an OLS regression. For this reason, we discuss in detail the substantive impact of our variables of interest and display the predicted values of the models.

X margin).

The substantive effects of the triple interaction are, however, difficult to interpret directly from the regression results. We thus present in Figure A9 the predicted number of projects in a district, based on the results of column (2), across values of margin of victory for government and opposition status. The solid black line indicates the predicted number of projects for governmental districts while the dash line indicates the predicted number of projects for opposition districts. Three main results stem from this figure. Among government districts, core districts (large margin of victory) are clearly advantaged over swing districts (small margin of victory). Actually, the average marginal effect of margin of victory under government districts (the slope of the solid line) is positive and statistically significant for values of margin of victory greater than 0.2 (see Figure A10). This result clearly supports hypothesis 3. Among opposition districts, core and swing districts are actually those that receive less projects, as districts in between receive more projects, but the difference remains small. Finally, while there is no difference in the predicted number of projects received among swing government and swing opposition districts (the solid and dash lines and the confidence intervals overlap for small values of margin of victory), the difference is important for core districts. For values of margin of victory greater than and equal to 0.5, the average marginal effect of government is positive and statistically significant at the 0.05 level (i.e. the difference between the solid and dash line is statistically different than 0 - see Figure A11). Few districts, however, have been won by such a margin of victory (about 15% of the observations). This last result sheds light on the slight positive effect of government in column (1) of Table A12. While opposition and government districts receive on average the same number of projects, this is not the case for a small number of districts that we characterize as core governmental ridings. Overall, the results in Figure A9 support hypothesis 3 but cannot reject the null of hypothesis 2. Finally, the results do not provide clear support for hypotheses 4 and 5 as there is few evidence that cabinet ministers or incumbents with more experience receive extra projects.

Overall, the previous results are similar to those based on the amount of funding received by districts albeit that the magnitudes of the effects are smaller. This suggests that it is more difficult for political officials to discriminate the number of projects across ridings based on political consideration than it is with respect to the amount of funding allocated. Presumably, it might be more difficult to reject projects if they meet a program criteria but easier to intervene in order to provide more or less funding.

TABLE A12: Predicting the number of projects allocated to ridings

	(1) Government	(2) Core/Swing
Government	0.13 (0.08)*	0.06 (0.14)
Cabinet minister	-0.07 (0.10)	-0.06 (0.10)
Margin		1.96 (0.82)**
Margin X Margin		-2.71 (1.46)*
Govt. X Margin		-1.49 (1.07)
Govt. X Margin X Margin		4.23 (1.69)**
Incumbency length	0.03 (0.02)*	0.01 (0.02)
Province government	0.04 (0.08)	0.02 (0.07)
Employment rate	-0.01 (0.01)	-0.02 (0.01)*
Population	-0.01 (0.00)*	-0.01 (0.00)*
Δ population	-0.00 (0.01)	0.00 (0.01)
Median income	-0.05 (0.02)**	-0.03 (0.02)*
% no degree	0.00 (0.01)	0.00 (0.01)
Pop. density	-0.14 (0.04)***	-0.16 (0.05)***
BC	-0.19 (0.18)	0.26 (0.20)
Manitoba	-0.18 (0.23)	0.13 (0.24)
New Brunswick	-0.74 (0.20)***	-0.27 (0.22)
Nova Scotia	-0.47 (0.21)**	0.04 (0.27)
Nunavut	-0.86 (0.30)***	-0.39 (0.33)
Ontario	0.23 (0.13)*	0.71 (0.18)***
Quebec	-0.50 (0.15)***	-0.09 (0.19)
Saskatchewan	-0.18 (0.19)	0.29 (0.20)
NL	-0.00 (0.26)	0.12 (0.24)
NT	1.31 (0.36)***	1.77 (0.36)***
Yukon	0.65 (0.23)***	1.08 (0.26)***
PE	-0.34 (0.29)	0.15 (0.31)
2008	1.04 (0.06)***	1.01 (0.06)***
2011	-0.54 (0.13)***	-0.64 (0.13)***
2015	0.90 (0.21)***	0.78 (0.21)***
Constant	4.29 (0.82)***	4.08 (0.77)***
Observations	606	606
# of ridings	215.00	215.00
Alpha	0.30	0.28
Log likelihood	-1906.14	-1888.77

Clustered standard errors in parantheses. *p<0.10, **p<0.05, ***p<0.01.

FIGURE A9: The predicted # of projects across margin of victory and government/opposition districts

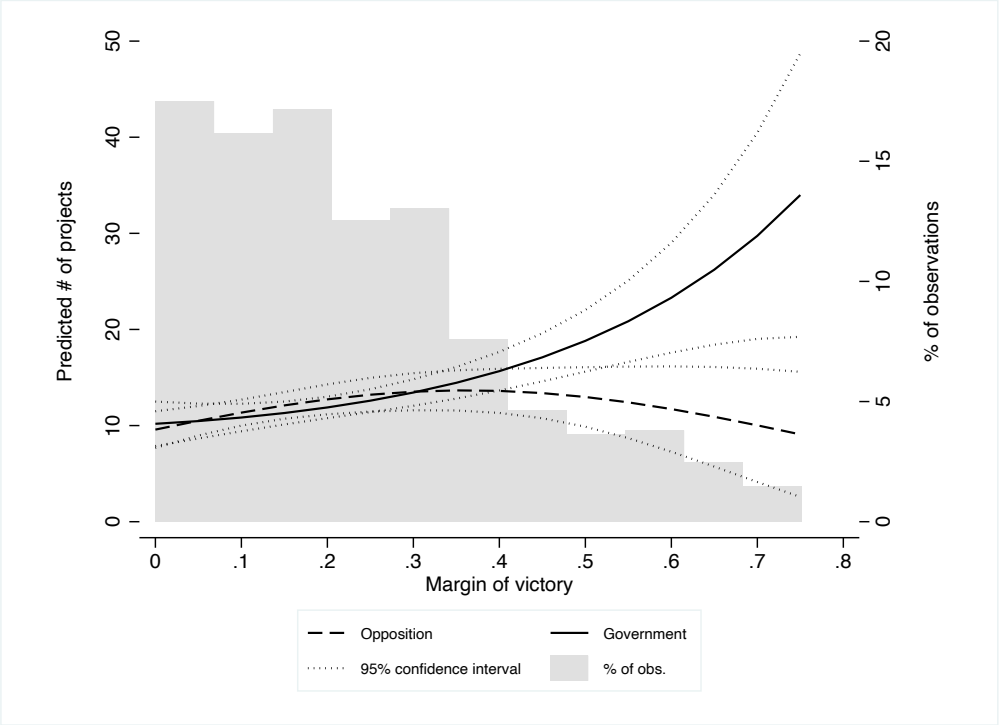


FIGURE A10: The average marginal effects of margin of victory on the number of projects across margin of victory and government/opposition districts

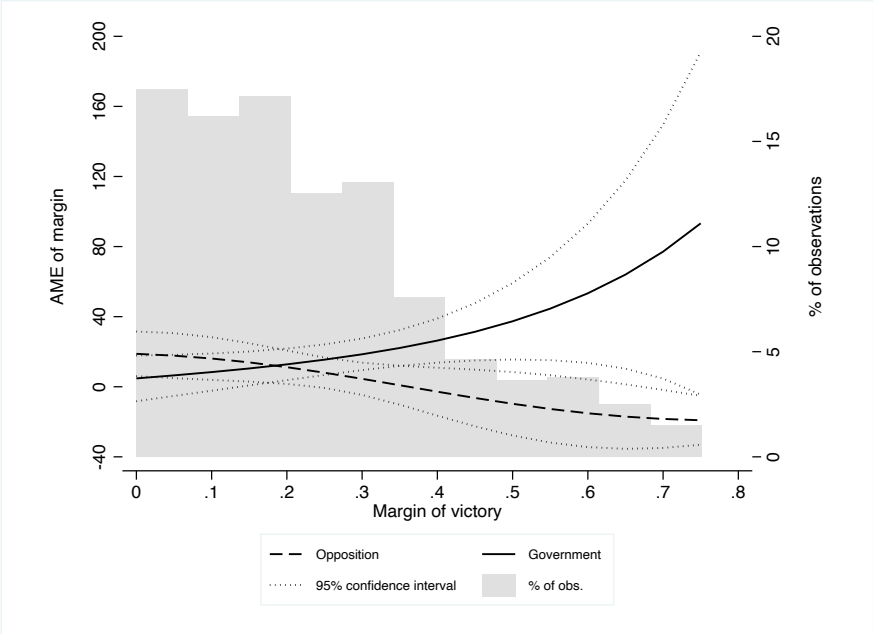


FIGURE A11: The average marginal effects of government on the number of projects across margin of victory

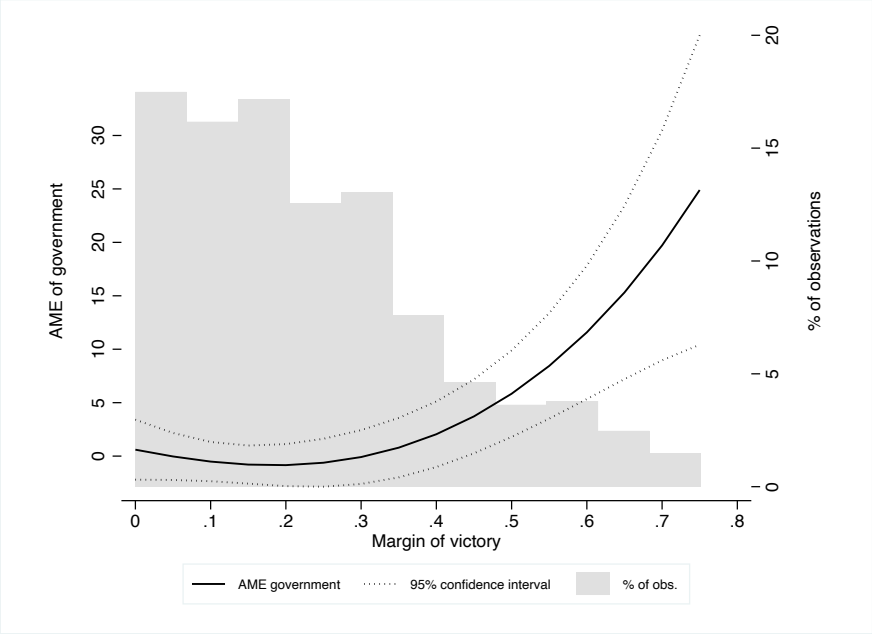


TABLE A13: Predicting the number of projects allocated to ridings (random-effects)

	(1) Government	(2) Core/Swing
Government	0.14 (0.06)**	0.10 (0.12)
Cabinet minister	-0.10 (0.09)	-0.11 (0.08)
Margin		1.87 (0.79)**
Margin X Margin		-3.46 (1.44)**
Govt. X Margin		-1.66 (1.00)*
Govt. X Margin X Margin		4.87 (1.66)***
Incumbency length	0.05 (0.02)***	0.03 (0.02)*
Province government	0.03 (0.07)	-0.02 (0.07)
Employment rate	-0.02 (0.01)*	-0.02 (0.01)**
Population	-0.00 (0.00)	-0.00 (0.00)
Δ population	0.00 (0.01)	0.00 (0.01)
Median income	-0.03 (0.02)	-0.01 (0.02)
% no degree	0.01 (0.01)	0.01 (0.01)
Pop. density	-0.15 (0.05)***	-0.17 (0.05)***
BC	-0.17 (0.17)	0.07 (0.20)
Manitoba	-0.30 (0.23)	-0.16 (0.24)
New Brunswick	-0.57 (0.23)**	-0.30 (0.25)
Nova Scotia	-0.30 (0.24)	-0.09 (0.25)
Nunavut	-1.33 (0.59)**	-0.83 (0.57)
Ontario	0.27 (0.14)*	0.52 (0.18)***
Quebec	-0.36 (0.15)**	-0.13 (0.19)
Saskatchewan	-0.12 (0.20)	0.20 (0.22)
NL	0.12 (0.25)	0.29 (0.24)
NT	1.41 (0.40)***	1.67 (0.40)***
Yukon	0.15 (0.49)	0.64 (0.49)
PE	-0.17 (0.33)	0.12 (0.34)
2008	0.92 (0.06)***	0.92 (0.06)***
2011	-0.67 (0.12)***	-0.74 (0.12)***
2015	0.66 (0.19)***	0.63 (0.19)***
Constant	3.04 (0.71)***	2.80 (0.69)***
Observations	606	606
# of ridings	215.00	215.00
Log likelihood	-1896.46	-1881.32

Standard errors in parantheses. *p<0.10, **p<0.05, ***p<0.01.

References

Long, JS and J Freese. 2014. *Regression models for categorical dependent variables using Stata.* College Station, TX: Stata Press.