

Online Appendix

“From Pork to Policy: The Rise of Programmatic Campaigning in Japanese Elections”

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Our quantities of interest were the proportions of each manifesto devoted to particularistic goods, programmatic goods, and within the latter, national security. Using the 7,497 Japanese-language candidate election manifestos to measure these quantities involved four steps. Here we describe each step in detail.

A Preparing the documents for quantitative text analysis

First, the Japanese-language manifestos had to be represented as a term-document matrix (TDM), constructed by converting the documents to plain text; stemming all words; removing punctuation, capitalization, words that appear too infrequently to convey useful information about the topic and words that appear too frequently to distinguish topics from each other; representing the documents as unordered vectors of the frequencies of unique word stems; and stacking the vectors together (Manning, Raghavan and Schutze, 2008). The poor quality of the original manifestos, the fact that they were written in Japanese, and the fact that they had different authors meant that these steps required us to solve four problems.

First, optical character recognition software failed to convert the manifestos into plain text, requiring many of them to be transcribed by hand. Second, a means of parsing out the Japanese text had to be found. We used the tokenizer MeCab (<http://mecab.sourceforge.net/>), implemented in the R programming language (<http://rmecab.jp/wiki/index.php?RMeCab>) by Ishida Motohiro (Ishida, 2010). Third, a means of identifying and removing unwanted words, including punctuation and stop words, had to be found. After parsing, MeCab enables users to classify word stems as having

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content or grammatical functions. This enabled us to discard words that served purely grammatical functions. Fourth, a means of identifying and correcting for heterogeneity in scriptive representations of the same word had to be found. Japanese has three scripts. Authors have flexibility over the choice of script in which to write each component of each word. Methods of converting all Japanese words to a single script exist but would have made interpretation of the results difficult because the script is syllabic, meaning that numerous pairs of words would have been rendered identical. We solved this problem by manually constructing a dictionary of words that appeared in the texts in different scripts and selecting a single scriptive representation in which to convert them. Solving these problems left us with a term-document matrix of 2,843 unique word stems (approximately 21 million observations).

B Fitting the model

As noted in the manuscript, we ran numerous model specifications and ascertained the nature of each topic in each specification by reading the word stems and manifestos with the highest probabilities of belonging to each topic. After experimenting with specifications of between 20 and 200 topics, we settled on a specification of 69 topics because it was one of the lowest specifications that appeared to produce topics that were fine-grained enough to resemble our three quantities of interest.

C Validating the fit

After selecting a specification of 69 topics, we took the following steps to confirm that each topic was substantively meaningful. First, we conducted in-depth qualitative interpretations of each topic by reading the 15 Japanese-language word stems and 10 Japanese-language manifestos with the highest probabilities of belonging to it, and used those to generate topic labels. English-language translations of the top 15 word stems and topic labels we generated are presented in Tables [C1](#), [C2](#), [C3](#), and [C4](#). Qualitative interpretations of some of the topics are below and the rest are available upon request. Two, we introduced information about the identity of the candidates discussing each topic to validate them. As the revised manuscript notes, this revealed that the model had uncovered two types of

topics: those that were primarily discussed by the candidates of a single party in a single election (what we call “party-platform topics”) and those that were primarily discussed by candidates of more than one party in more than one election (what we call “issue topics”). This section uses information about the identity of the candidates discussing five of the topics to demonstrate that a model specification of 69 topics uncovered substantively-meaningful topics from the manifestos.

First, candidates whose manifestos were comprised of **Agriculture, Forestry, and Fisheries (Topic 52)** told voters that the industry was facing a crisis, with abandoned rice fields and diminishing numbers of successors to take over family rice farm. They pledged to oppose liberalization of the rice market, expand internal demand in Japan, and continue maintaining infrastructure for the industry at no cost to the farmer. It is reasonable to expect that candidates in urban districts would devote less of their manifesto to discussion of agriculture than candidates in rural districts. A difference in means test between mean discussion of agriculture, forestry, and fisheries (Topic 52) in the manifestos of the 405 candidates in very-rural districts (3.5% of manifesto) and the 2,105 candidates not in very-rural districts (1.6% of manifesto) for the elections under SNTV-MMD was significant, with a p-value of <0.001 . We used the standard measure for urbanness, which classifies districts on a four-point scale. The test was conducted between candidates in very-rural districts (urban=1) and those in other districts (urban = 2:4), but the test is also significant when candidates are divided according to urban=1:2 and urban=3:4; and urban = 1:3 and urban=4. Figure C1 demonstrates the correlation between mean proportion of this topic in the manifestos of the 2,520 candidates who ran under SNTV-MMD and urban-ness of the district.

Table C1: Topics in the Manifestos and Stems Identifying Each Topic, 1986-2009 (Topics 1-18)

Topic Number	Topic Label	Stems Identifying Topic
1	postal privatization	reform,postal,privateize,koizumi,structure,the government,bureaucracy,move forward, private,ldp,japan,system,private sector,pension,realize
2	from concrete to people	pension,yen,abolish,reform,trillion,realize,waste,japan,tax increase,reduce, unify,government,child,community,person
3	appropriator for the district	move forward,provide,carry out,work at,society,measure,stimulate, enrich,encourage, stable,establish,business,realize,small-medium,nurture
4	fixer-upper for the district	ward,policy,community,town,kagoshima,all my force,election,national government,building,yokohama,measure,small-medium,electricity-generation,move forward,energy
5	political reform, protect the constitution	politic,reform,citizen,business,ldp,japan,jcp,donation,money politics,party, election,prohibit,constitution,decay
6	national security policy	japan,country,foreign policy,nation,society,citizen,national,security,community,abduction, econom,protect,problem,north korea,education
7	no more unfair taxes, peace constitution	politic,consumption,tax,abolish,ldp,citizen,election,tax system,government,recruit, realize,japan,agriculture,reform,party
8	building a society kind to women	society,women,environment,building,child,politic,make,aim for,education,community, reassure,person,welfare,realize,men-women
9	primary industries and tourism	stimulate,street,provide,industry,tourism,road,car,quickly,prefecture,airport, highway,farming-forestry,fishing,construction,community
10	transportation	provide,tracks,road,construction,quickly,encourage,realize,city,station,works, highway,national highway,transportation,move forward,complete
11	no tax increases, no U.S.-Japan alliance	japan,citizen,jcp,politics,tax increase,tax,consumption,oppose,protect,business, democracy,ism,stick to,ldp,main character
12	economic recovery	economy,recover,measure,healthful,japan,all my force,voice,saga,genuine,policy, politic,try hard,reassure,century,national government,trust
13	vision for Japan	society,politic,econom,japan,lifestyle,citizen,country,rich,make,world, tax,justice tax system,fair,feel keenly
14	politics for the civilian, not for bureaucrats	civilian,politic,society,bureaucrat,realize,dpj,center,aim for,lifestyle,leading role, new,participate,sovereign,information,establish
15	political and administrative reform	politic,reform,bureaucrat,japan,rural area,collusion,country,structure,change,realize, bureaucracy,special interest,politician,econom,citizen,central
16	no more big business-favoritism	japan,tax,consumption,ldp,business,politics,america,pension,peace,oppose, political party,donation,iraq,constitution,opposition party
17	regional devolution	rural area,devolve,system,reform,education,country,authority,fiscal revenue, administration,business,society,push for,the government,establish,small-medium
18	building a spiritually-rich community	building,rich,politic,community,provide,society,realize,aim for,industry,education, old home,hometown,lifestyle,culture,heart

Table C2: Topics in the Manifestos and Stems Identifying Each Topic, 1986-2009 (Topics 19-35)

Topic Number	Topic Label	Stems Identifying Topic
19	political reform	politic, reform, election, citizen, ldp, japan, political party, new, policy, person, change, responsibility, have, politician, behavior
20	consumption tax is to fund the military	tax, politic, consumption, abolish, ldp, citizen, liberal, japan, protect, rice, business, import, realize, donation, block
21	no more LDP, no more public works	politic, japan, society, citizen, secure, livelihood, protect, ldp, budget, jcp, constitution, works, reform, country, public
22	doing away with decayed LDP politics	politic, reform, decay, realize, government, ldp, election, new, citizen, system, lifestyle, money, politics, party, international, prevent
23	credit-claiming: lawmaking	politician, diet, bill, legislation, establish, person, submit, law, problem, activity, hor, revision, member, question, plan
24	welfare and medical care	tax, consumption, reform, welfare, tax system, citizen, society, education, system, elderly, revise, medical, politic, administration, correct
25	statesperson and appropriator	problem, prefecture, tackle, necessary, effort, econom, issue, election, miyazaki, our country, policy, country, society, measure, push for
26	no American bases	base, okinawa, america, military, tax, consumption, peace, reduction, oppose, residents of prefecture, u.s.-japan alliance, reversion, jsp, withdrawal, treaty
27	investing in young people	person, politic, child, japan, have, society, work, make, self, future, dream, necessary, generation, force, heart
28	protecting people	rate, self sufficiency, agriculture, protect, pension, food, food supply, system, secure, reassure, burden, employment, lifestyle, income, improve
29	opposition to military spending	jcp, ldp, japan, spending, yen, politic, protect, citizen, military, oppose, livelihood, peace, education, welfare, cut
30	social security and child support	system, support, medical, pension, enrich, employment, realize, nursing care, burden, strengthen, education, secure, society, measure, move forward
31	no reform of medical care	jcp, japan, politic, citizen, party, tax, consumption, oppose, tax increase, stick to, election, protect, stop, flow, ldp
32	hometown development	politic, hometown, society, reform, japan, international, era, stable, my country, development, rich, move forward, century, support, peace
33	revitalizing the local community	society, community, reform, econom, environment, building, move forward, industry, education, realize, reassure, nurture, system, construct, policy
34	no tax increase, no constitutional revision	tax increase, yen, constitution, tax, ldp, japan, article, deduction, dpi, privatize, protect, war, consumption, postal
35	tax cuts for everyone	tax cut, yen, education, tax, enlarge, internal demand, business, large-scale, society, income, small-medium, measure, carry out, move forward, indirect

Table C3: Topics in the Manifestos and Stems Identifying Each Topic, 1986-2009 (Topics 36-52)

Topic Number	Topic Label	Stems Identifying Topic
36	no postal privatization	tax increase,protect,oppose,constitution,ordinary people,japan,citizen,ldp,evil revision,opposition party,politic,privatize,reliable,jcp,postal
37	stubbornly for peace and human rights	peace,society,constitution,human rights,realize,welfare,education,politic,protect,basic,aim for,environment,discrimination,men-women,push for
38	local facilities and infrastructure	city,tokyo,city,politic,region,problem,district,politician,my local,home,town,necessary,prefecture,zone,money,policy
39	saving the natural environment	environment,earth,conserve,water,green,warming,destroy,pollute,east,prevent,nature,develop,forestry,clear,air
40	better education and child-care facilities	education,move forward,provide,enrich,information,city,realize,nursing care,medical,technology,school,child,japan,facility,day care
41	reforming japan	japan,new,reform,society,politic,era,rural area,world,make,building,century,aim for, econom.,administration,country
42	pensions and child allowance	pension,yen,system,medical,community,abolish,allowance,monthly,business,child,money,waste,lifestyle,supply,realize
43	security and reassurance	measure,safe,reassure,japan,society,econom,education,business,small-medium,economy,employment,support,system,pension,recover
44	post offices	privatize,postal,post,office,reform,citizen,private sector,works,public corporation,funds,rural areas,service,corporation,society,country
45	no consumption tax, no constitutional revision	tax,constitution,consumption,tax increase,japan,politic,livelihood,evil revision,society,protect,america,peace,secure,ldp
46	credit-claiming: district	heisei,year,kumamoto,challenge,elect,minister,showa,budget,age,prime minister,young,money,hor,since-generation
47	building a safe, reassuring community	community,reassure,medical care,revitalize,support,healthful,safe,business,building,protect,employment,agriculture,small-medium,child-rearing,food
48	love of thy hometown	politic,hometown,support,say,citizen,heart,prefecture,effort,realize,reform,politic,hometown,support,all my force,protect
49	no more iron triangle	trust,development,national government,all my force,protect citizen,japan,business,politic,push for,tax,consumption,tax increase,jcp,election,protect,peace,political party,small-medium,pr
50	catching up with the rest of japan	prefecture,community,industry,aomori,necessary,north,era,new,force,politic,city-town-village,econom,information,old home,shinkansen
51	problems facing Japan	problem,tackle,politic,technology,force,issue,science,international,policy,resolve,society,environment,father,japan,heart
52	agriculture, forestry, fisheries	agriculture,industry,manufacture,provide,carry out,fishing,akita,develop,push for,prefecture,merchant,yamagata,community,development,technology

Table C4: Topics in the Manifestos and Stems Identifying Each Topic, 1986-2009 (Topics 53-69)

Topic Number	Topic Label	Stems Identifying Topic
53	small government	reform,tax,administration,consumption,politic,regulation,citizen,realize,nursing,rural area, ministries and agencies,reduce,ease,force through,administrative reform
54	economic stimulus	citizen,politic,election,yen,recession,ldp,measure,policy,econom,kita-kyushu, dissolution,nakasone,all my force,tax cut,reform
55	fiscal reconstruction	fiscal policy,politic,citizen,election,administration,prime minister,reform,necessary, reconstruct,responsibility,deficit,future,country,loan,vote
56	health and leisure infrastructure	welfare,education,building,society,person,culture,tokushima.international,health,enrich, sports,aim for,elderly,transportation,medical
57	credit-claiming: posts	member,chief,diet,agriculture and forestry,party,ldp,budget,hor,committee chair,politician, fishery,force,wakayama,executive,try hard
58	benefits for organized groups	business,education,small-medium,enrich,carry out,welfare,push for,better,stable,household, stimulate,measure,benefits,building,pension
59	alternation of government	government,alternation,tax,politic,citizen,waste,change,japan,dpj,pension, reassure,make,society,policy,lifestyle
60	no other party can be trusted	tax,consumption,japan,jcp,business,tax increase,politic,party,oppose,america, peace,true,extend,election,collusion
61	housing and tax policy	tax,housing,lifestyle,politic,tax cut,realize,property,land,consumption,rent, inheritance,pension,fixed,tax-exempt,yen
62	worry about earthquakes and nuclear power	fukui,shizuoka,recovery,coalition,kobe,gifu,econom,ruling party,prefecture,disaster victim, airport,industry,government,disaster,person
63	liberal democracy is best!	politic,ism,liberal,society,democracy,osaka,peace,realize,japan,human, aim for,rich,welfare,protect,person
64	free medical care, no military spending	yen,citizen,politic,japan,medical,government,spending,tax,trillion,consumption, ldp-komeito,elderly,business,constitution
65	not a strong military but a kind society	politic,peace,nakasone,education,protect,citizen,welfare,yen,realize,tax cut, oppose,lifestyle,spending,tax,large-scale
66	social security	yen,trillion,pension,person,tax,burden,spending,works,insurance,annual, fiscal revenue,consumption,public,waste,medical
67	nursing care	protect,nursing care,society,employment,insurance,child,medical,livelihood, push for,environment,uncertain,pension,make,public,life
68	from roads to pension	road,pension,money,realize,person,abolish,highway,politician,cost-free,government, reduce,subsidy,works,politics,public
69	Japan in the global economy	japan,world,econom,country,peace,education,international,person,nation,century, have,necessary,era,problem,culture

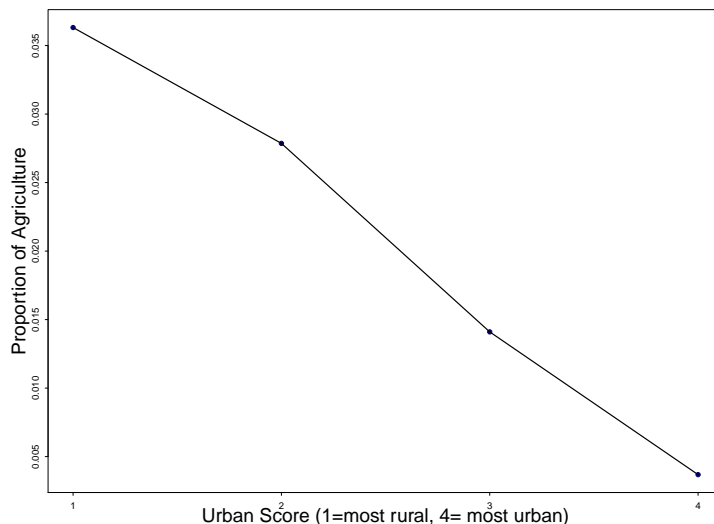


Figure C1: Discussion of Agriculture, Forestry and Fisheries (Topic 52) in the manifestos of the 2,520 candidates running in elections under SNTV-MMD correlates with urban-ness of the district. This plots the mean proportion of manifesto devoted to this topic by urbanness of the district. An urban-rural code of 1 indicates that the district was very rural (n = 409), 2 is less rural (n = 781), 3 indicates that it was even less rural (n = 654), and 4 indicates that it was urban (n = 676).

Second, candidates whose manifestos were comprised of **Worry About Earthquakes and Nuclear Power (Topic 62)** promised to protect Japanese people from earthquakes such as the 1995 Great Hanshin Earthquake and accidents such as the 1995 accident at the Monju nuclear power plant.¹ They argued that nuclear power was unsuited to earthquake-prone countries like Japan and promised to rescind plans to build new reactors and devote more money to developing decommissioning technology and alternative sources of energy, such as wind power. By utilizing alternative forms of energy and investing in energy-saving technologies, candidates assured voters that Japan could get by without nuclear power. It is reasonable to expect that candidates in prefectures with nuclear power plants would devote less of their manifesto to this topic than candidates in prefectures without nuclear power plants.² A difference in means test between mean discussion of this topic in the manifestos of the 1,767 candidates running in districts located in prefectures with nuclear power plants (0.6% of manifesto) and the 5,730 candidates not running in those districts (0.3% of manifesto) for all elections was significant, with a p-value of <0.001.

¹The presence of “Fukui” and “Shizuoka” in the list of words suggests that candidates competing in these prefectures may have exhibited the most concern.

²Thirteen Japanese prefectures host nuclear power plants: Aomori, Ehime, Fukui, Fukushima, Hokkaido, Ibaragi, Ishikawa, Kagoshima, Miyagi, Niigata, Saga, Shimane, and Shizuoka.

Third, candidates whose manifestos were comprised of **Building a Society Kind to Women (Topic 8)** promised to build a society in which women were supported in the workplace and in the home, women could feel in reassured raising and educating their children, men and women could live equally, and women could choose what they wanted. Candidates pledged to bring about measures to allow women to balance their commitments in the home with their commitments at work. It is reasonable to expect that discussion of this topic would be more common among female candidates because, for example, of the advantage they might perceive they had in this policy area. A difference in means test between discussion of this topic in the manifestos of the 658 female candidates (4% of manifesto) and the 6,839 male candidates (1.6% of manifesto) for all elections was also significant, with a p-value of <0.001 .

Fourth, candidates whose manifestos were comprised of **Liberal Democracy is Best! (Topic 63)** told voters that the revolutions occurring in Eastern Europe were proof that liberal democracy had won and socialism had lost. “The proof is in the pudding. Socialist countries are bankrupt and offer limited political freedoms”, one candidate told voters. “The Berlin wall should have come down, and it did. I will continue protecting freedom and democracy for the happiness of Japanese citizens”. Another explained that “socialism just couldn’t keep up with the changing times”, and was “blown away by a wave of democratization and liberalism”. Another promised to “protect Japan’s liberal society” so that a peaceful society could be passed on to those living in the 21st century. “The peace and prosperity that Japan has built up over the last fifty years“, one candidate told voters, “is due to the hard work of Japanese citizens”. “But what made this hard work possible was a liberal society with a market economy and the basic democratic principle of respecting other people’s points of view”. It is reasonable to expect that because this topic focused on advertising the benefits of liberal democracy, it would have been discussed most in the 1990 election, which followed the collapse of the Berlin Wall, and by LDP candidates. Figure C2 plots the mean proportion of each manifesto devoted to Liberal Democracy is Best! for all eight elections. It reveals that it was discussed more in 1990 than in other elections. A difference in means test showed that the mean proportion of discussion of this topic in the manifestos of LDP candidates was 4.3% versus 0.3% for socialist and communist candidates in the 1990 election. The p-value for the difference in means test was <0.001 .

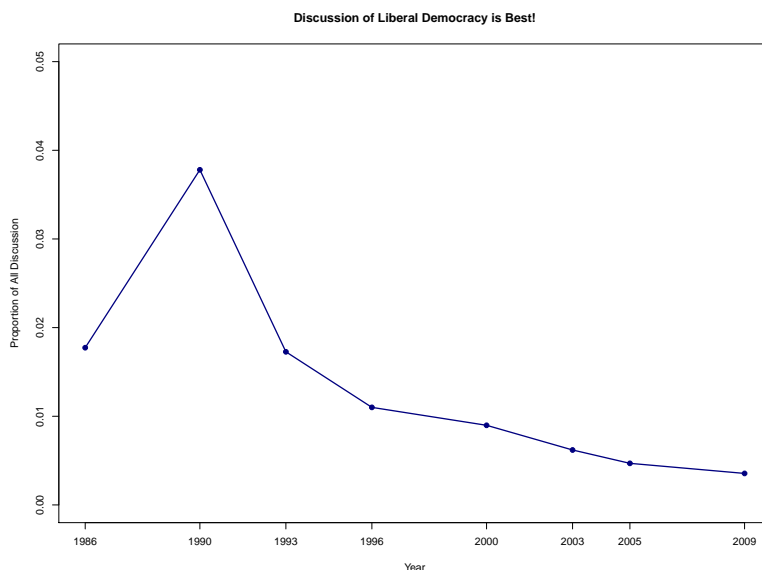


Figure C2: Candidates sang the praises of liberal democracy in the 1990 election. This figure plots the mean proportion of discussion of Liberal Democracy is Best! (Topic 63) in the manifestos of all candidates in each year.

Fifth, **Consumption Tax is to Fund the Military (Topic 20)**, was a party platform topic discussed by candidates from the Japan Communist Party (JCP) in 1990. As Figure C3 reveals, this topic was discussed primarily in the 1990 election and comprised 73% of the average JCP candidate manifesto in this election. Candidates pledged their “resolute” and “unconditional” opposition to the imposition of a consumption tax. While the LDP was claiming that the proceeds of the tax would be used to fund medical care for the elderly, candidates told voters, “this is a complete lie!” The real motivation for the new tax was to secure a sound financial basis for large-scale military spending. Candidates described emotional scenes they had experienced, in which “elderly people and mothers holding their babies grasped my hands, tears flowing from their eyes, pleading with me to abolish the consumption tax”. Candidates promised voters that the JCP would pursue a “politics in which Japanese citizens are the main characters”.

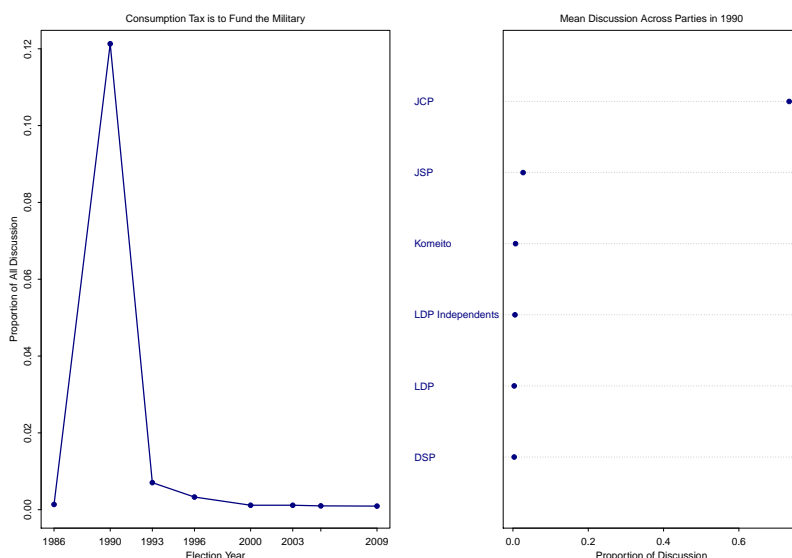


Figure C3: JCP candidates campaigned on a platform of Consumption Tax is to Fund the Military in 1990. The figure on the left plots the mean proportion of all 7,497 manifestos devoted to Topic 20 across the eight elections. It shows that Topic 20 was discussed in the 1990 election. The figure on the right plots the mean proportion of discussion devoted to Topic 20 in the manifestos of the 854 serious candidates competing in the 1990 election by party affiliation. It shows that Topic 20 was a JCP topic, and comprised 73% of the average manifesto produced by JCP candidates in this election.

D Classifying the topics as particularistic or programmatic

The validation process revealed that a model specification of 69 topics had uncovered three credit-claiming topics (Topics 23, 46, and 57). Because these concerned a candidate’s past accomplishments, they were left out of the analysis that follows. To classify the remaining topics as particularistic or programmatic, we used a systematic approach that closely reflected the article’s theoretical definition of particularistic and programmatic goods. This involved several steps. First, we read manifestos with high probabilities of belonging to each of the 66 topics and collected the groups of people candidates suggested would benefit from the promises associated with it. We refer to these groups as the topic’s purported “beneficiaries”. Tables D1, D2, and D3 display each topic with its purported beneficiaries. Many topics had multiple beneficiaries.³

³In topics National Security Policy; Economic Recovery; Problems Facing Japan; Japan in the Global Economy; and Vision for Japan the purported beneficiary was “Japan”; in Saving the Natural Environment it was “the natural environment”; in From Concrete to People and Alternation of Government it was “people”; and in Politics for the Civilian, Not For Bureaucrats it was “the civilian”. These were all coded as “citizens”. When a topic concerned tax policy and did not mention a beneficiary, such as consumers or white-collar workers, we coded it as “taxpayers”. “Agriculture, forestry, and fisheries workers”, “construction company workers”, and “workers in SMEs” refer to workers in those industries who resided in the candidate’s district, whereas “the agriculture, forestry, and fishing industry”, “the construction industry”, and “SMEs” refer to workers in that industry across Japan.

Table D1: Purported Beneficiaries of Each Topic, 1986-2009 (Topics 1-25)

Topic Number	Topic Label	Purported Beneficiaries
1	postal privatization	citizens; white-collar workers; private-sector employees
2	from concrete to people	citizens; white-collar workers; parents; private-sector employees
3	appropriator for the district	workers in SMEs; construction company workers; agriculture, forestry, and fisheries workers; transportation workers; former military veterans; district residents
4	fixer-upper for the district	district residents; workers in SMEs; construction company workers
5	political reform, protect the constitution	citizens; consumers; women; elderly; farmers
6	national security policy	citizens; parents
7	no more unfair taxes, peace constitution	citizens; consumers; farmers
8	building a society kind to women	women; parents; elderly
9	primary industries and tourism	agriculture, forestry, fisheries workers; construction company workers; transportation workers; district residents
10	transportation	transportation workers; construction company workers; district residents
11	no tax increases, no U.S.-Japan alliance	citizens; consumers; farmers
12	economic recovery	SMEs; private-sector employees
13	vision for Japan	citizens; parents; women; elderly
14	politics for the civilian, not for bureaucrats	citizens
15	political and administrative reform	citizens; private-sector employees; taxpayers; NPOs
16	no more big business-favoritism	citizens; consumers; private-sector employees
17	regional devolution	citizens; private-sector employees; parents; SMEs
18	building a spiritually-rich community	district residents; construction company workers; workers in SMEs; workers in native industries; transportation workers
19	political reform	citizens
20	consumption tax is to fund the military	citizens; consumers; farmers; elderly;
21	no more LDP, no more public works	citizens
22	doing away with decayed LDP politics	citizens
24	welfare and medical care	citizens; consumers; elderly; parents
25	statesperson and appropriator	citizens; district residents; construction company workers; workers in SMEs; the agriculture, forestry, and fishing industry

Table D2: Purported Beneficiaries of Each Topic, 1986-2009 (Topics 26-47)

Topic Number	Topic Label	Purported Beneficiaries
26	no American bases	residents of prefectures with U.S. bases; women; consumers
27	investing in young people	young people; parents
28	protecting people	citizens; unemployed; farmers; elderly; mid-career workers; white-collar workers; low-income earners; SMEs; workers in sub-contractors
29	opposition to military spending	citizens; elderly; parents; low-income earners
30	social security and child support	citizens; elderly; parents; unemployed; non-permanent workers
31	no reform of medical care	citizens; elderly; farmers
32	hometown development	district residents; workers in SMEs; construction company workers; agriculture, forestry, and fisheries workers
33	revitalizing the local community	district residents; construction company workers; workers in native industries; agriculture, forestry, and fisheries workers; workers in SMEs; transportation workers
34	no tax increase, no constitutional revision	citizens; consumers
35	tax cuts for everyone	consumers; white-collar workers; self-employed; SMEs; construction company workers; workers in native industries
36	no postal privatization	citizens; residents of rural areas; private-sector employees
37	stubbornly for peace and human rights	citizens; parents; women
38	local facilities and infrastructure	district residents; construction company workers; elderly residents; workers in SMEs; workers in native industries; transportation workers; farmers citizens
39	saving the natural environment	parents; citizens; women; private-sector employees; white-collar workers; non-home owners; venture capitalists; SMEs; NPOs; residents of urban areas
40	better education and child-care facilities	citizens; parents
41	reforming Japan	citizens; parents; elderly; farmers; the unemployed
42	pensions and child allowance	citizens; parents; private-sector employees; SMEs; residents of rural areas
43	security and reassurance	citizens
44	post offices	citizens; consumers
45	no consumption tax, no constitutional revision	district residents; workers in SMEs; construction company workers; agriculture, forestry, and fisheries workers; transportation workers; workers in native industries; the agriculture, forestry, and fishing industry
47	building a safe, reassuring community	

Table D3: Purported Beneficiaries of Each Topic, 1986-2009 (Topics 48-69)

Topic Number	Topic Label	Purported Beneficiaries
48	love of thy hometown	district residents; workers in SMEs; construction company workers; agriculture, forestry, and fisheries workers; workers in native industries
49	no more iron triangle	citizens; the agriculture, forestry, and fishing industry
50	catching up with the rest of Japan	district residents; workers in SMEs; construction company workers; agriculture, forestry, and fisheries workers; workers in native industries; transportation workers
51	problems facing Japan.	citizens
52	agriculture, forestry, fisheries	agriculture, forestry, and fisheries industry
53	small government	citizens; elderly; taxpayers
54	economic stimulus	citizens; SMEs; the construction industry
55	fiscal reconstruction	citizens
56	health and leisure infrastructure	district residents; construction company workers; workers in SMEs; agriculture, forestry, and fisheries workers
58	benefits for organized groups	workers in SMEs; owners of small shops; construction company workers; agriculture, forestry, and fishing industry; workers in native industries; former military veterans; elderly; disabled; single mothers; working women; factory workers; orphans from traffic accident
59	alternation of government	citizens
60	no other party can be trusted	citizens; taxpayers
61	housing and tax policy	citizens; low-income earners; non-home owners; part-time workers
62	worry about earthquakes and nuclear accidents	citizens
63	liberal democracy is best!	citizens
64	free medical care, no military spending	citizens; elderly; parents; non-permanent workers; private-sector employees
65	not a strong military but a kind society	citizens; parents; agriculture, forestry, and fishing industry; elderly
66	social security	citizens; white-collar workers; disabled; unemployed; non-permanent workers; taxpayers
67	nursing care	taxpayers
68	from roads to pension	citizens; elderly; workers; women; disabled; sick
69	Japan in global economy	citizens; parents
		citizens

Second, we compiled data from Japanese government and other sources to calculate the proportion of each beneficiary in Japan’s population. Table D4 lists the beneficiaries for which we could find data.⁴ The sources consulted in compiling Table D4 include the Final Report of the 2005 Population Census (and previous census reports); the Survey on Wages of Local Government Employees; the Survey on Recruitment of National Government Employees of General Class; Historical Statistics of Japan; the Special Survey of the Labor Force; the Labor Force Survey (Detailed Tabulation); the Comprehensive Survey of Living Condition of the People on Health and Welfare; Social Security Statistics Yearbook; and online data portals hosted by the National Tax Agency’s Tax Statistics Division; the Japan Small Business Association; the Ministry of Economy, Trade, and Industry; the Ministry of Health, Labor, and Welfare’s Welfare Statistics Division; and the National Police Agency’s Traffic Bureau. The number of district residents was calculated by dividing the total number of eligible voters at the time of the 1986, 1990, 1996, 2000, and 2005 HOR elections by the total number of districts used in that election.⁵

As the manuscript notes, we define policies that purport to benefit large groups of voters as “programmatically” and policies that purport to benefit small groups of voters as “particularistic”. The third step involved using the purported beneficiaries of each topic (presented in Tables D1, D2, and D3) and the relative size of each beneficiary in Japan’s population (presented in Table D4) to calculate the percentage of Japan’s population each topic purported to benefit. To this end, we used each topic’s *largest beneficiary*. For example, if the beneficiaries were “citizens”, “parents”, and “women”, we classified the topic’s beneficiary as “citizens”, which constitute 99% of Japan’s population. Table D5 presents each topic, the percentage of Japan’s population it purported to benefit, and our classification of it, which we explain in more detail below. Of the 66 policy-related topics, this system classified 14 as particularistic and 52 as programmatic.

⁴The census is taken every five years, so we present results from the five years between 1985 and 2005, which correspond approximately to our time frame. We could not find data on the numbers of “dispatch workers” and “the sick” for all years. Nor could we find data on the numbers of workers in sub-contracting; workers in “native industries” (the definition of which would differ across district); the owners of small shops; venture capitalists; and workers in NPOs. We could not find data on the numbers of orphans from traffic accidents, so used the number of annual traffic fatalities. The absence of data for these beneficiaries does not influence our classification of each topic because as we explain below, we use the *largest* beneficiary associated with each topic to classify it.

⁵The figure for 1985 comes from the 1986 election, and the figure for 1995 comes from the 1996 election. The average number of district residents changes in 1995 because of the introduction of single-member districts. From 2000, we used the total number of eligible voters in the SMD portion of the mixed-member electoral system, rather than the total number of eligible voters in the PR portion.

Table D4: Percentage of Each Beneficiary in Japan's Total Population, 1985-2005

Beneficiary	1985	1990	1995	2000	2005	Mean %
Orphans From Traffic Accidents	0.008	0.009	0.009	0.007	0.005	0.007
Transportation Workers	0.022	0.023	0.010	0.008	0.008	0.014
Agriculture, Forestry, and Fisheries Workers	0.034	0.027	0.010	0.008	0.008	0.018
Construction Workers	0.033	0.036	0.018	0.017	0.014	0.024
Factory Workers	0.073	0.073	0.029	0.026	0.021	0.044
Workers in SMEs	0.265	0.284	0.126	0.135	0.129	0.188
District Residents	0.545	0.558	0.259	0.264	0.269	0.379
Single Mothers	0.453	0.447	0.422	0.493	0.586	0.480
Dispatch Workers				0.260	0.830	0.545
Former Military Veterans	1.716	1.516	1.314	1.109	0.893	1.310
Unemployed	1.289	1.084	2.291	2.458	3.048	2.034
Farmers	3.615	3.103	2.111	1.841	1.536	2.441
Agriculture, Forestry, and Fishing Industry	4.471	3.553	3.042	2.500	2.321	3.177
Disabled	2.735	3.099	3.443	3.831	4.300	3.482
Construction Industry	4.351	4.726	5.280	4.956	4.220	4.707
The Self-Employed	7.410	6.719	6.224	5.662	5.279	6.259
Part-time Workers	4.122	5.744	6.570	8.493	8.766	6.739
Non-permanent Workers	5.411	7.127	7.972	10.03	12.78	8.664
Low-Income Earners	15.48	12.21	11.85	11.87	13.24	12.93
Elderly	10.30	12.05	14.54	17.34	20.09	14.86
Working Women	18.73	19.77	20.40	20.27	20.17	19.87
Residents of Rural Areas	23.26	22.63	21.95	21.32	13.70	20.57
Mid-Career Workers	23.67	23.17	22.12	20.35	20.29	21.92
Parents	27.08	26.77	26.42	26.33	26.14	26.55
Non-home Owners	29.92	29.98	30.56	29.62	28.69	29.75
The Sick					30.51	30.51
White-collar Workers	27.63	29.46	31.57	31.90	32.35	30.58
SMEs	34.75	37.16	37.86	40.40	38.80	37.79
Young People	49.64	23.55	44.10	41.72	38.72	39.55
Residents of Prefectures with U.S. Bases	44.48	44.89	45.04	45.29	45.76	45.09
Private-sector Employees	44.86	46.63	47.82	46.47	45.26	46.21
Women	50.85	50.90	50.96	51.07	51.20	51.00
Residents of Urban Areas	76.74	77.37	78.05	78.68	86.30	79.43
Citizens	99.30	99.13	98.92	98.67	98.43	98.89

This table presents a list of the unique beneficiaries discovered in the topics, and the percentage of Japan's population comprised of each (rounded up). The beneficiaries are listed from the smallest percentage of the population (children orphaned in traffic accidents) to the largest (Japanese citizens).

Table D5: Classification of Each Topic as a Particularistic or Programmatic Good (Topics 1-69)

Number	Topic Label	%	Classification
1	postal privatization	98.89	prog
2	from concrete to people	98.89	prog
3	appropriator for the district	0.379	part
4	fixer-upper for the district	0.379	part
5	political reform, protect the constitution	98.89	prog
6	foreign and national security policy	98.89	prog
7	no more unfair taxes, peace constitution	98.89	prog
8	building a society kind to women	51.00	prog
9	primary industries and tourism	0.379	part
10	transportation	0.379	part
11	no tax increases, no U.S.-Japan alliance	98.89	prog
12	economic recovery	46.21	prog
13	vision for Japan	98.89	prog
14	politics for the civilian, not for bureaucrats	98.89	prog
15	political and administrative reform	98.89	prog
16	no more big business-favoritism	98.89	prog
17	regional devolution	98.89	prog
18	building a spiritually-rich community	0.379	part
19	political reform	98.89	prog
20	consumption tax is to fund the military	98.89	prog
21	no more LDP, no more public works	98.89	prog
22	doing away with decayed LDP politics	98.89	prog
24	welfare and medical care	98.89	prog
25	statesperson and appropriator	98.89	prog
26	no American bases	98.89	prog
27	investing in young people	39.55	prog
28	protecting people	98.89	prog
29	opposition to military spending	98.89	prog
30	social security and child support	98.89	prog
31	no reform of medical care	98.89	prog
32	hometown development	0.379	part
33	revitalizing the local community	0.379	part
34	no tax increase, no constitutional revision	98.89	prog
35	tax cuts for everyone	98.89	prog
36	no postal privatization	98.89	prog
37	stubbornly for peace and human rights	98.89	prog
38	local facilities and infrastructure	0.379	part
39	saving the natural environment	98.89	prog
40	better education and child-care facilities	98.89	prog
41	reforming japan	98.89	prog
42	pensions and child allowance	98.89	prog
43	security and reassurance	98.89	prog
44	post offices	98.89	prog

Continued on next page

Table D5 – continued from previous page

Number	Topic Label	%	Classification
45	no consumption tax, no constitutional revision	98.89	prog
47	building a safe, reassuring community	3.177	part
48	love of thy hometown	0.379	part
49	no more iron triangle	98.89	prog
50	catching up with the rest of Japan	0.379	part
51	problems facing Japan	98.89	prog
52	agriculture, forestry, fisheries	3.177	part
53	small government	98.89	prog
54	economic stimulus	98.89	prog
55	fiscal reconstruction	98.89	prog
56	health and leisure infrastructure	0.379	part
58	benefits for organized groups	19.87	part
59	alternation of government	98.89	prog
60	no other party can be trusted	98.89	prog
61	housing and tax policy	98.89	prog
62	earthquakes and nuclear accidents	98.89	prog
63	liberal democracy is best!	98.89	prog
64	free medical care, no military spending	98.89	prog
65	not a strong military but a kind society	98.89	prog
66	social security	98.89	prog
67	nursing care	98.89	prog
68	from roads to pension	98.89	prog
69	Japan in global economy	98.89	prog

Table D5 reveals that 11 topics had district residents (0.4% of Japan’s population) as their largest beneficiary, and 49 topics had Japanese citizens (99% of Japan’s population) as their largest beneficiary. The large discrepancy in size of beneficiary meant that it was relatively straightforward to classify the former as particularistic and the latter as programmatic. Of the remaining 6 topics, Topic 8 (“Building A Society Kind to Women”) had “women” as its largest beneficiary so was classified as programmatic; Topic 12 (“Economic Recovery”) had “private-sector employees” so was classified as programmatic; Topic 27 (“Investing in Young People”) had “young people” so was classified as programmatic; and Topic 47 (“Building a Safe, Reassuring Community”) and Topic 52 (“Agriculture, Forestry, and Fisheries”) had “the agriculture, forestry and fishing industry”, which constituted 3.2% of Japan’s population, so were classified as particularistic. Whereas Topic 58 (“Benefits for Organized Groups”) had “working women” as its largest beneficiary, which constituted

20% of Japan’s population, we classified it as particularistic because Table D3 indicated that it had 12 beneficiaries, 10 of which constituted less than 4% of Japan’s population (see Table D4). Moreover, our qualitative interpretation (presented below) strongly suggests that it is a particularistic topic.

Candidates whose manifestos were comprised of **Benefits for Organized Groups (Topic 58)** promised to increase the amount and kind of benefits being provided to particular groups of voters and introduce new benefits. While some promised to introduce preferential tax treatment and low-interest loans for the small- and medium-sized enterprises in the district, others promised to keep interest rates low to stimulate domestic consumption, which they said would assist these enterprises as well as owners of small shops in the district. Others promised to increase the benefits available to the elderly, disabled, factory workers, households headed by single mothers, and children orphaned in traffic accidents. Under headings such as “Taking Life Seriously”, candidates promised to expand public works in the district, protect farmers from trade liberalization, adopt measures to stabilize the prices of agricultural products, and nurture native industries by “adjusting finance and tax policy”. Under headings such as “Protecting Peace”, others promised to increase the amount of pension available to military veterans and their war-bereaved family members. For working women, candidates promised to raise the share of income that would be exempt from taxation. They assured voters that it did not matter if they were not eligible for benefits currently, as they also planned to widen voter eligibility.

Using these classifications, we created estimates of our three quantities of interest for all 7,497 candidates. As a final check, we conducted a test to validate our first quantity of interest. Iversen and Rosenbluth (2010) suggest that fewer politicians are female in countries using electoral systems that require politicians to deliver particularistic goods to their constituents because these systems place a premium on uninterrupted careers. We reasoned that if female politicians are at a disadvantage when it comes to providing particularistic goods because they cannot credibly commit to an uninterrupted career, they would promise fewer particularistic goods than their male counterparts. We found a statistically-significant difference in mean discussion of particularistic goods between LDP candidates who were female ($n = 66$) and LDP candidates who were male ($n = 2,289$) in these eight elections. On average, the manifestos of female LDP candidates were 31% particularistic goods, whereas those of male LDP candidates were 44% particularistic goods. This test had a p-value of <0.001 .

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