

Digital_Index

Municipality digitalization and local engagement: The case of Chile

Abstract

Data and Methods

Data

All data considered in this study is publicly available.

Municipal-Level Data

First, municipal-level data was considered, covering the 343 mainland municipalities of Chile (excluding Juan Fernández and Easter Island).

Variables

Digital Municipality Index. The level of digitalization was measured using the Digital Municipality Index, developed by the Millennium Nucleus of Inequalities and Digital Opportunities (NUDOS). The index is based on 34 potential services offered by municipal websites. These 34 services were grouped into two categories: "Payments, procedures, and online services," which includes 13 activities, and "Information and transparency," which includes 21 activities.

Population. Population was measured as the projected number of people living in each municipality in 2023, expressed in log terms. The data comes from the National Municipal Information System (SINIM).

Municipal Income. Municipal income was measured as own-source revenues, meaning the income generated independently by each municipality, expressed in log terms. The data comes from the National Municipal Information System (SINIM).

Rurality. Rurality was measured as the percentage of the population living in rural areas within each municipality in 2023. This data was also obtained from the National Municipal Information System (SINIM).

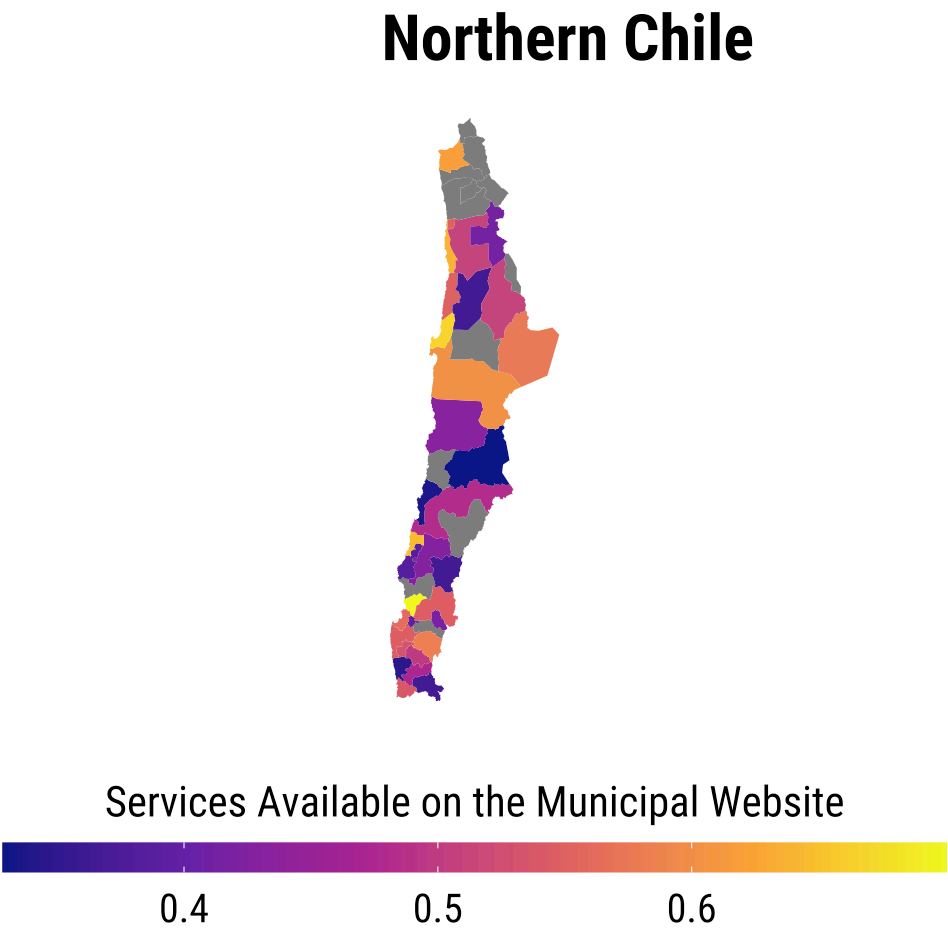
Qualified Municipal Workforce. To capture the professional resources of each municipality, the number of employees with a university degree was considered, expressed in log terms. The data comes from the National Municipal Information System (SINIM).

Individual-Level Data

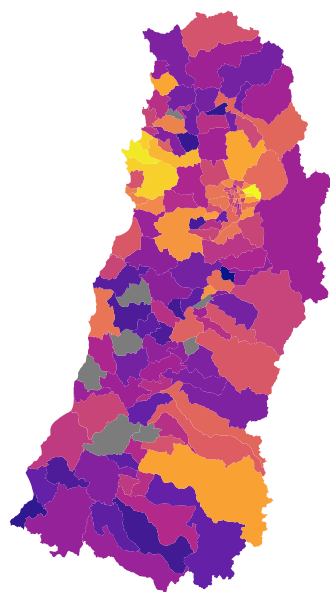
Results

First Part: Analyses at the municipal level

Figure 1 Digital Municipality Index



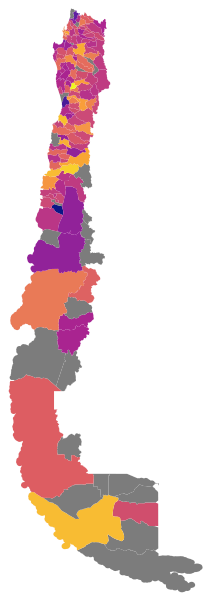
Central Region of Chile



Services Available on the Municipal Website



Southern Chile



Services Available on the Municipal Website

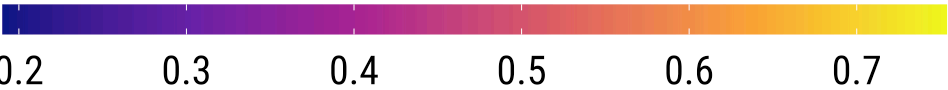
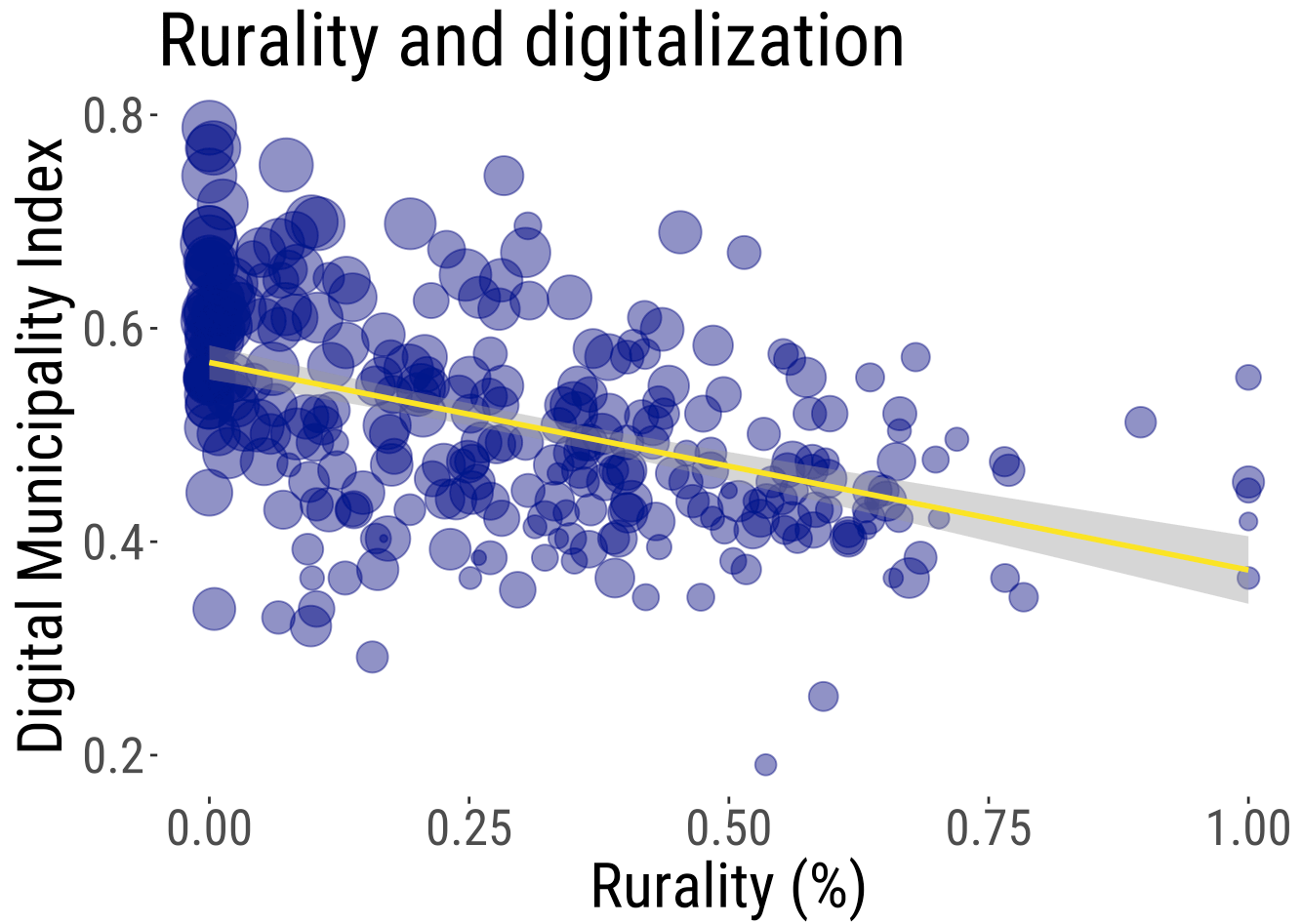
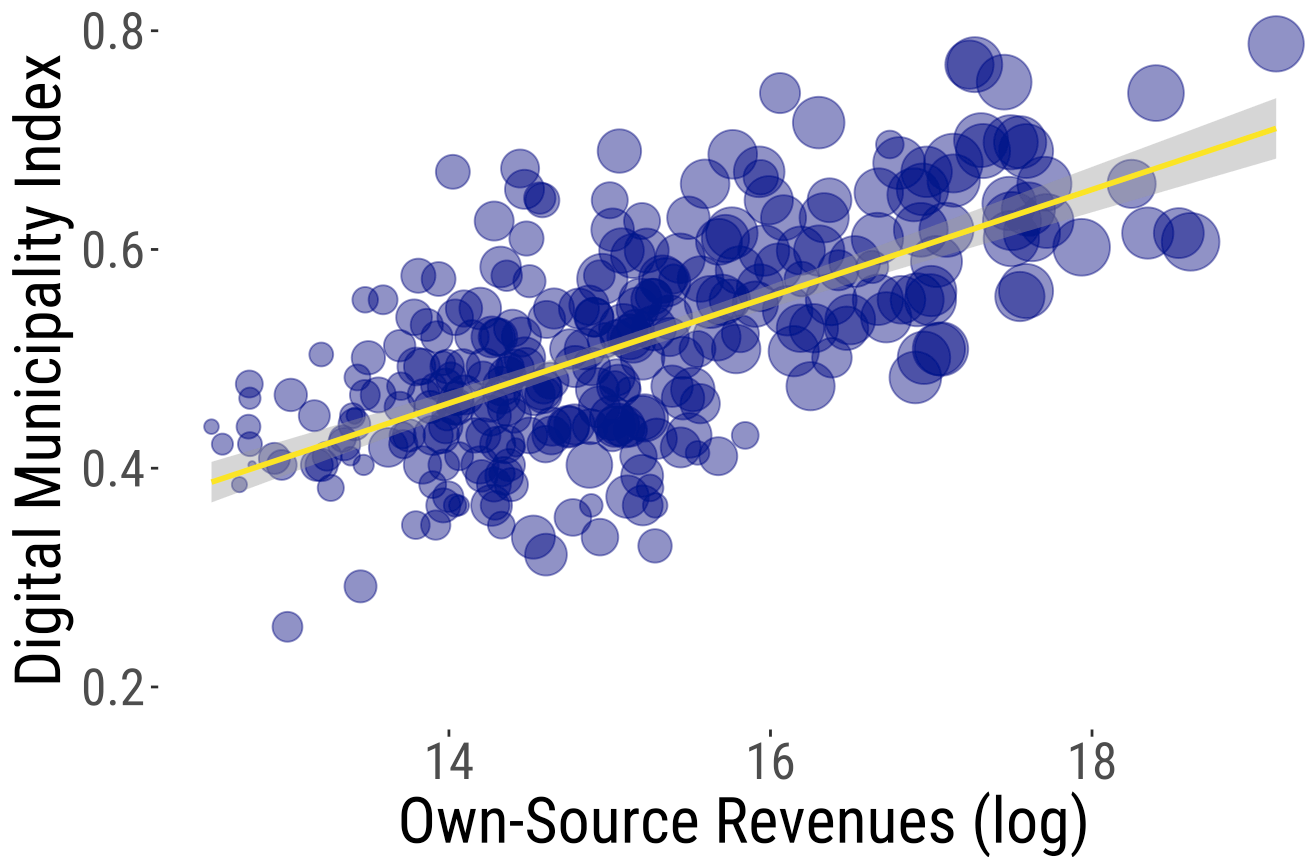


Figure 2. Dispersion diagram of the Digital Municipality Index, considering population, rurality, municipal income and qualified municipal workforce.



Municipal incomes and digitalization



Workforce and digitalization

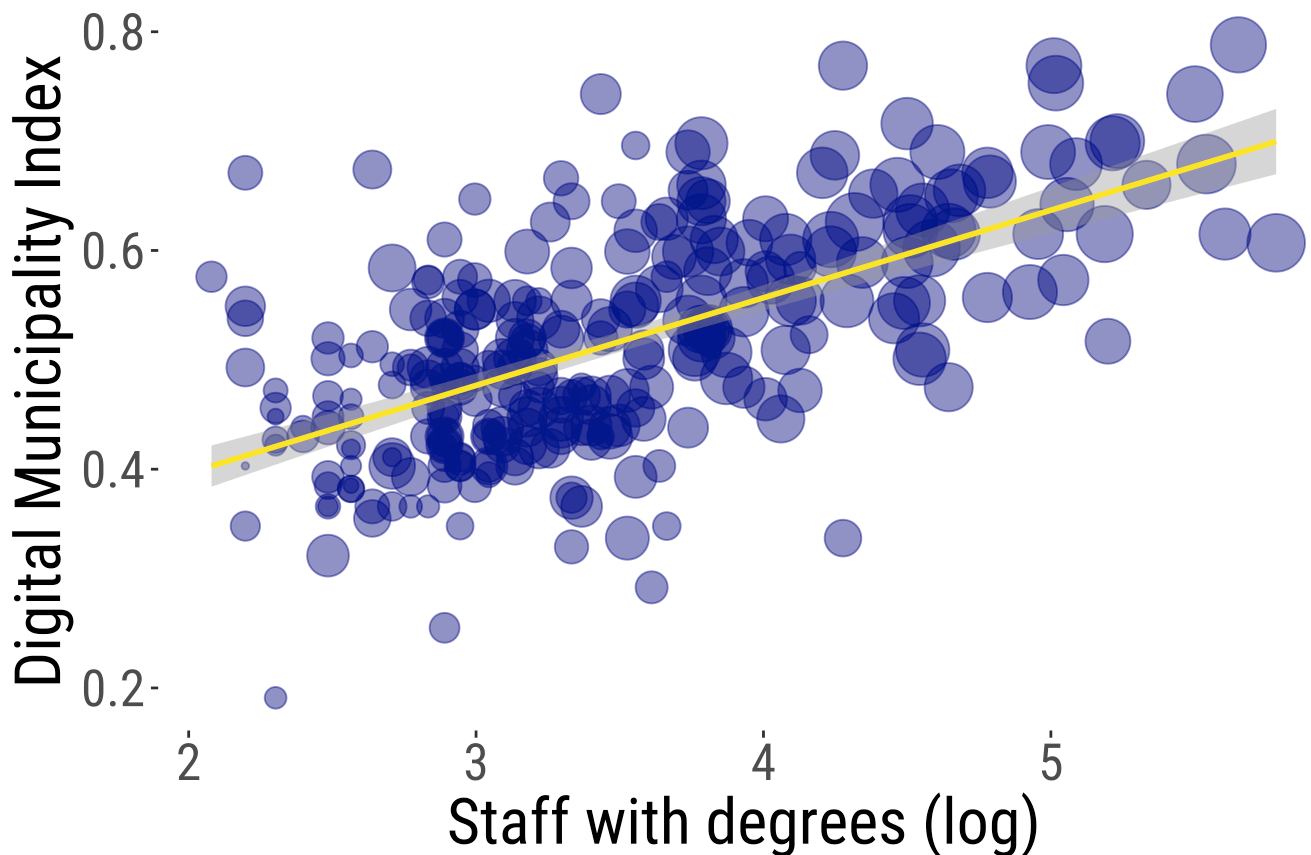


Table 1 OLS for Digital Municipality Index at the municipal level

```
Call:
lm(formula = Municipio_Digital ~ log_Poblacion.y + Pob_Rural_Porc +
    log_Ingresos_Propios_Permanentes + log_Num_Planta_Profes,
    data = md_north)

Residuals:
    Min       1Q   Median       3Q      Max
-0.172945 -0.062475 -0.001547  0.052815  0.181538

Coefficients:
                Estimate Std. Error t value Pr(>|t|)
(Intercept)      0.107520   0.382362   0.281    0.781
log_Poblacion.y    0.029862   0.030354   0.984    0.336
Pob_Rural_Porc   -0.019628   0.085000  -0.231    0.820
log_Ingresos_Propios_Permanentes  0.001218   0.036246   0.034    0.973
log_Num_Planta_Profes  0.021216   0.043438   0.488    0.630

Residual standard error: 0.09674 on 22 degrees of freedom
(17 observations deleted due to missingness)
Multiple R-squared:  0.3352,    Adjusted R-squared:  0.2143
F-statistic: 2.773 on 4 and 22 DF,  p-value: 0.05255

Call:
lm(formula = Municipio_Digital ~ log_Poblacion.y + Pob_Rural_Porc +
    log_Ingresos_Propios_Permanentes + log_Num_Planta_Profes,
    data = md_centre)

Residuals:
    Min       1Q   Median       3Q      Max
-0.154499 -0.058198 -0.006089  0.047512  0.203650

Coefficients:
                Estimate Std. Error t value Pr(>|t|)
(Intercept)   -0.064568   0.129568  -0.498    0.61907
log_Poblacion.y  0.001935   0.012211   0.158    0.87432
Pob_Rural_Porc  -0.032916   0.041531  -0.793    0.42944
log_Ingresos_Propios_Permanentes  0.030329   0.009939   3.051    0.00275 **
log_Num_Planta_Profes  0.032186   0.016297   1.975    0.05034 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.07676 on 133 degrees of freedom
(13 observations deleted due to missingness)
Multiple R-squared:  0.4533,    Adjusted R-squared:  0.4368
F-statistic: 27.56 on 4 and 133 DF,  p-value: < 2.2e-16
```

```
Call:
lm(formula = Municipio_Digital ~ log_Poblacion.y + Pob_Rural_Porc +
    log_Ingresos_Propios_Permanentes + log_Num_Planta_Profes,
    data = md_south)
```

Residuals:

Min	1Q	Median	3Q	Max
-0.165738	-0.034722	0.001215	0.035254	0.187039

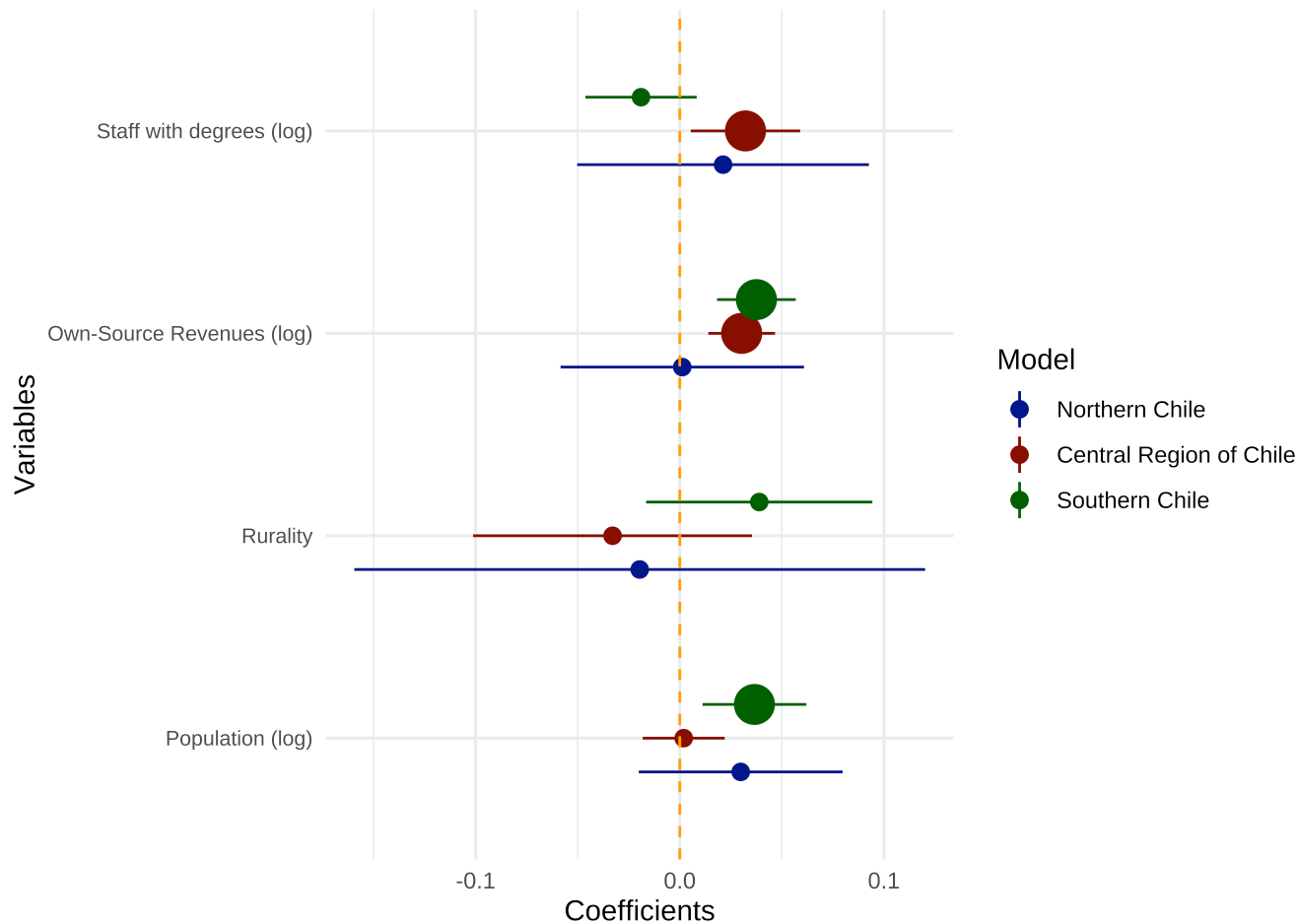
Coefficients:

	Estimate	Std. Error	t value	Pr(> t)	
(Intercept)	-0.37230	0.11127	-3.346	0.00111	**
log_Poblacion.y	0.03658	0.01546	2.366	0.01967	*
Pob_Rural_Porc	0.03894	0.03369	1.156	0.25018	
log_Ingresos_Propios_Permanentes	0.03756	0.01173	3.201	0.00178	**
log_Num_Planta_Profes	-0.01899	0.01658	-1.145	0.25462	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.0624 on 113 degrees of freedom
(30 observations deleted due to missingness)
Multiple R-squared: 0.5043, Adjusted R-squared: 0.4868
F-statistic: 28.74 on 4 and 113 DF, p-value: < 2.2e-16

Figure 3. OLS for Digital Municipality Index at the municipal level



Second Part: Analyses at the individual level, Chilean region of Valparaíso as case study

Table 2 OLS for Online Political Efficacy at the Individual Level

```
Call:
lm(formula = ope ~ dig_mun + ingresos + sex + age + SES + education +
    polint1 + factor(year), data = EOP_na)

Residuals:
    Min       1Q   Median       3Q      Max
-2.25255 -0.57262  0.01157  0.58451  2.40451

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)  -0.8335110   0.2722259   -3.062  0.002216 **
dig_mun        0.0628736   0.1892802    0.332  0.739779
ingresos       0.0234738   0.0199761    1.175  0.240036
sex           -0.1118931   0.0284459   -3.934  8.53e-05 ***
age           -0.0054584   0.0009470   -5.764  8.93e-09 ***
SES            0.0322226   0.0181292    1.777  0.075591 .
education      0.0003735   0.0089250    0.042  0.966621
polint1        0.2059392   0.0144155   14.286 < 2e-16 ***
factor(year)2019 0.0356047   0.0504140    0.706  0.480082
factor(year)2020 0.1826610   0.0504150    3.623  0.000295 ***
factor(year)2021 0.2193974   0.0490987    4.468  8.12e-06 ***
factor(year)2022 0.1377123   0.0510459    2.698  0.007013 **
factor(year)2023 0.0808351   0.0497503    1.625  0.104291
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.8163 on 3525 degrees of freedom
Multiple R-squared:  0.1004,    Adjusted R-squared:  0.09734
F-statistic: 32.78 on 12 and 3525 DF,  p-value: < 2.2e-16
```

```
Call:
lm(formula = ope1 ~ dig_mun + ingresos + sex + age + SES + education +
    polint1 + factor(year), data = EOP)

Residuals:
    Min       1Q   Median       3Q      Max
-2.4386 -0.9272 -0.2065  0.8428  3.0113

Coefficients:
              Estimate Std. Error t value Pr(>|t|)
(Intercept)  2.0158426   0.2334708   8.634 < 2e-16 ***
dig_mun       0.3344091   0.1642812    2.036  0.04182 *
ingresos     -0.0160665   0.0173093   -0.928  0.35333
sex          -0.1072485   0.0248226   -4.321 1.57e-05 ***
```


age	-0.0032945	0.0007359	-4.477	7.66e-06	***
SES	0.0315852	0.0165241	1.911	0.05598	.
education	0.0066604	0.0075999	0.876	0.38085	
polint1	0.2899029	0.0134981	21.477	< 2e-16	***
factor(year)2019	-0.0120224	0.0423253	-0.284	0.77638	
factor(year)2020	0.1306870	0.0428467	3.050	0.00229	**
factor(year)2021	0.1742567	0.0426253	4.088	4.39e-05	***
factor(year)2022	0.0966985	0.0421595	2.294	0.02183	*
factor(year)2023	0.1357113	0.0424812	3.195	0.00140	**

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.147 on 9035 degrees of freedom

(876 observations deleted due to missingness)

Multiple R-squared: 0.08166, Adjusted R-squared: 0.08044

F-statistic: 66.95 on 12 and 9035 DF, p-value: < 2.2e-16

Call:

```
lm(formula = ope2 ~ dig_mun + ingresos + sex + age + SES + education +
    polint1 + factor(year), data = EOP)
```

Residuals:

Min	1Q	Median	3Q	Max
-2.6968	-0.9090	-0.1476	1.0073	2.8881

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	2.5526876	0.2405014	10.614	< 2e-16 ***
dig_mun	0.0948949	0.1690449	0.561	0.574567
ingresos	-0.0197231	0.0178225	-1.107	0.268479
sex	-0.1189262	0.0255602	-4.653	3.32e-06 ***
age	-0.0057334	0.0007573	-7.571	4.07e-14 ***
SES	0.0248230	0.0170402	1.457	0.145224
education	0.0107365	0.0078344	1.370	0.170588
polint1	0.2853752	0.0138945	20.539	< 2e-16 ***
factor(year)2019	0.0402664	0.0435722	0.924	0.355443
factor(year)2020	0.2404766	0.0440682	5.457	4.97e-08 ***
factor(year)2021	0.2394908	0.0439330	5.451	5.13e-08 ***
factor(year)2022	0.1822987	0.0434032	4.200	2.69e-05 ***
factor(year)2023	0.1698371	0.0437362	3.883	0.000104 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.182 on 9050 degrees of freedom

(861 observations deleted due to missingness)

Multiple R-squared: 0.08598, Adjusted R-squared: 0.08476

F-statistic: 70.94 on 12 and 9050 DF, p-value: < 2.2e-16

Call:

```
lm(formula = ope3 ~ dig_mun + ingresos + sex + age + SES + education +
  polint1 + factor(year), data = EOP)
```

Residuals:

Min	1Q	Median	3Q	Max
-3.2453	-0.8597	0.0835	0.8870	3.1416

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	3.0915358	0.2318256	13.336	< 2e-16 ***
dig_mun	0.1211931	0.1630717	0.743	0.45739
ingresos	-0.0326388	0.0171761	-1.900	0.05743 .
sex	-0.1281791	0.0246553	-5.199	2.05e-07 ***
age	-0.0131379	0.0007304	-17.987	< 2e-16 ***
SES	0.0296475	0.0164300	1.804	0.07119 .
education	0.0242999	0.0075586	3.215	0.00131 **
polint1	0.3134212	0.0134025	23.385	< 2e-16 ***
factor(year)2019	0.1131056	0.0421336	2.684	0.00728 **
factor(year)2020	0.3084672	0.0425611	7.248	4.59e-13 ***
factor(year)2021	0.3921039	0.0423958	9.249	< 2e-16 ***
factor(year)2022	0.3323703	0.0419134	7.930	2.45e-15 ***
factor(year)2023	0.3583126	0.0421915	8.493	< 2e-16 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.14 on 9047 degrees of freedom

(864 observations deleted due to missingness)

Multiple R-squared: 0.1545, Adjusted R-squared: 0.1533

F-statistic: 137.7 on 12 and 9047 DF, p-value: < 2.2e-16

Call:

```
lm(formula = ope4 ~ dig_mun + ingresos + sex + age + SES + education +
  polint1 + factor(year), data = EOP)
```

Residuals:

Min	1Q	Median	3Q	Max
-1.9999	-0.9094	-0.2103	0.7526	3.0366

Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	2.5175088	0.2269142	11.095	< 2e-16 ***
dig_mun	0.0110763	0.1594418	0.069	0.94462
ingresos	-0.0382186	0.0167982	-2.275	0.02292 *
sex	-0.0733878	0.0241085	-3.044	0.00234 **
age	0.0002152	0.0007145	0.301	0.76327
SES	0.0398772	0.0160530	2.484	0.01301 *
education	-0.0003770	0.0073846	-0.051	0.95928
polint1	0.2079554	0.0130958	15.880	< 2e-16 ***
factor(year)2019	-0.0926567	0.0411831	-2.250	0.02448 *
factor(year)2020	0.0399136	0.0416130	0.959	0.33750

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Digital_Index

factor(year)2021 -0.0040094 0.0414659 -0.097 0.92297

factor(year)2022 -0.0492010 0.0409865 -1.200 0.23001

factor(year)2023 0.0395825 0.0413336 0.958 0.33827

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.113 on 9014 degrees of freedom

(897 observations deleted due to missingness)

Multiple R-squared: 0.04179, Adjusted R-squared: 0.04051

F-statistic: 32.76 on 12 and 9014 DF, p-value: < 2.2e-16

Table 3 OLS for Effective Municipality Webpage use at the Individual Level

Call:

glm(formula = useweb ~ dig_mun + ingresos + sex + age + SES +

education + ope1 + polint1 + factor(year), family = binomial,

data = EOP)

Deviance Residuals:

Min 1Q Median 3Q Max

-2.0881 -0.8979 -0.5130 1.0005 2.4585

Coefficients:

Estimate Std. Error z value Pr(>|z|)

(Intercept) 0.669631 0.463267 1.445 0.14833

dig_mun 2.116871 0.329828 6.418 1.38e-10 ***

ingresos -0.258097 0.034565 -7.467 8.20e-14 ***

sex 0.204991 0.049462 4.144 3.41e-05 ***

age -0.020517 0.001475 -13.910 < 2e-16 ***

SES 0.063337 0.032112 1.972 0.04856 *

education 0.268587 0.015182 17.691 < 2e-16 ***

ope1 -0.001315 0.020926 -0.063 0.94991

polint1 0.388400 0.026798 14.494 < 2e-16 ***

factor(year)2019 0.098047 0.084914 1.155 0.24823

factor(year)2020 0.057333 0.085835 0.668 0.50417

factor(year)2021 0.235920 0.084848 2.781 0.00543 **

factor(year)2022 -0.055524 0.084761 -0.655 0.51242

factor(year)2023 0.239818 0.084472 2.839 0.00453 **

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 12124 on 9006 degrees of freedom

Residual deviance: 10255 on 8993 degrees of freedom

(917 observations deleted due to missingness)

AIC: 10283

Number of Fisher Scoring iterations: 4

```
Call:
glm(formula = useadm ~ dig_mun + ingresos + sex + age + SES +
     education + ope1 + polint1 + factor(year), family = binomial,
     data = EOP)
```

Deviance Residuals:

Min	1Q	Median	3Q	Max
-1.8200	-1.2337	0.8124	1.0032	1.5395

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-0.716416	0.691695	-1.036	0.30032
dig_mun	0.940059	0.478421	1.965	0.04942 *
ingresos	-0.026864	0.050712	-0.530	0.59630
sex	-0.359459	0.072696	-4.945	7.63e-07 ***
age	0.002282	0.002407	0.948	0.34320
SES	0.021366	0.045975	0.465	0.64213
education	0.070633	0.022507	3.138	0.00170 **
ope1	-0.086474	0.030155	-2.868	0.00414 **
polint1	0.048174	0.037623	1.280	0.20039
factor(year)2019	0.613936	0.124925	4.914	8.90e-07 ***
factor(year)2020	0.263683	0.123956	2.127	0.03340 *
factor(year)2021	0.868788	0.123201	7.052	1.77e-12 ***
factor(year)2022	0.806193	0.127752	6.311	2.78e-10 ***
factor(year)2023	1.101731	0.126573	8.704	< 2e-16 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 4862.7 on 3598 degrees of freedom
Residual deviance: 4684.1 on 3585 degrees of freedom
(6325 observations deleted due to missingness)
AIC: 4712.1

Number of Fisher Scoring iterations: 4

```
Call:
glm(formula = usetransp ~ dig_mun + ingresos + sex + age + SES +
     education + ope1 + polint1 + factor(year), family = binomial,
     data = EOP)
```

Deviance Residuals:

Min	1Q	Median	3Q	Max
-1.4975	-0.8529	-0.7447	1.2774	1.9611

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	2.297178	0.743561	3.089	0.00201 **

dig_mun	-0.132567	0.504660	-0.263	0.79279	
ingresos	-0.120432	0.054416	-2.213	0.02688	*
sex	0.081365	0.076637	1.062	0.28837	
age	-0.006758	0.002561	-2.638	0.00833	**
SES	-0.104425	0.048189	-2.167	0.03023	*
education	-0.023066	0.023701	-0.973	0.33045	
ope1	0.054706	0.031774	1.722	0.08512	.
polint1	0.187025	0.039903	4.687	2.77e-06	***
factor(year)2019	-0.847531	0.128260	-6.608	3.90e-11	***
factor(year)2020	-1.062510	0.130671	-8.131	4.25e-16	***
factor(year)2021	-1.106647	0.127535	-8.677	< 2e-16	***
factor(year)2022	-0.962728	0.131162	-7.340	2.14e-13	***
factor(year)2023	-1.068093	0.129171	-8.269	< 2e-16	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 4454.3 on 3599 degrees of freedom

Residual deviance: 4302.2 on 3586 degrees of freedom

(6324 observations deleted due to missingness)

AIC: 4330.2

Number of Fisher Scoring iterations: 4

Call:

```
glm(formula = useother ~ dig_mun + ingresos + sex + age + SES +
     education + ope1 + polint1 + factor(year), family = binomial,
     data = EOP)
```

Deviance Residuals:

Min	1Q	Median	3Q	Max
-1.4111	-0.8572	-0.6969	1.2215	2.1178

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)	
(Intercept)	1.774523	0.754089	2.353	0.01861	*
dig_mun	2.283555	0.523149	4.365	1.27e-05	***
ingresos	-0.293450	0.055653	-5.273	1.34e-07	***
sex	0.050999	0.077234	0.660	0.50905	
age	-0.004268	0.002588	-1.649	0.09913	.
SES	-0.063457	0.048860	-1.299	0.19403	
education	0.062894	0.024348	2.583	0.00979	**
ope1	0.088835	0.032222	2.757	0.00583	**
polint1	0.114505	0.040192	2.849	0.00439	**
factor(year)2019	0.787863	0.135643	5.808	6.31e-09	***
factor(year)2020	-0.051913	0.142060	-0.365	0.71479	
factor(year)2021	-0.165953	0.140291	-1.183	0.23684	
factor(year)2022	-0.324393	0.149306	-2.173	0.02981	*
factor(year)2023	0.922752	0.133330	6.921	4.49e-12	***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 4441.2 on 3575 degrees of freedom
Residual deviance: 4220.2 on 3562 degrees of freedom
(6348 observations deleted due to missingness)
AIC: 4248.2

Number of Fisher Scoring iterations: 4

Call:
glm(formula = useweb_nona ~ dig_mun + ingresos + sex + age +
 SES + education + ope1 + polint1 + factor(year), family = binomial,
 data = EOP)

Deviance Residuals:

Min	1Q	Median	3Q	Max
-2.0880	-0.8948	-0.5110	1.0011	2.4708

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	0.624728	0.462692	1.350	0.17695
dig_mun	2.115909	0.329528	6.421	1.35e-10 ***
ingresos	-0.257026	0.034535	-7.443	9.87e-14 ***
sex	0.205033	0.049416	4.149	3.34e-05 ***
age	-0.020543	0.001473	-13.949	< 2e-16 ***
SES	0.061958	0.032099	1.930	0.05358 .
education	0.269547	0.015170	17.768	< 2e-16 ***
ope1	-0.001480	0.020915	-0.071	0.94360
polint1	0.389550	0.026783	14.545	< 2e-16 ***
factor(year)2019	0.123565	0.084685	1.459	0.14453
factor(year)2020	0.079318	0.085583	0.927	0.35403
factor(year)2021	0.261197	0.084617	3.087	0.00202 **
factor(year)2022	-0.030218	0.084534	-0.357	0.72074
factor(year)2023	0.260137	0.084180	3.090	0.00200 **

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 12166 on 9047 degrees of freedom
Residual deviance: 10278 on 9034 degrees of freedom
(876 observations deleted due to missingness)
AIC: 10306

Number of Fisher Scoring iterations: 4

```
Call:
glm(formula = useadm_nona ~ dig_mun + ingresos + sex + age +
     SES + education + ope1 + polint1 + factor(year), family = binomial,
     data = EOP)
```

Deviance Residuals:

Min	1Q	Median	3Q	Max
-1.7453	-0.7471	-0.5127	-0.2572	2.7684

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-1.162760	0.516329	-2.252	0.0243 *
dig_mun	2.105365	0.370142	5.688	1.29e-08 ***
ingresos	-0.201874	0.038445	-5.251	1.51e-07 ***
sex	-0.054781	0.054034	-1.014	0.3107
age	-0.013978	0.001654	-8.452	< 2e-16 ***
SES	0.058909	0.035009	1.683	0.0924 .
education	0.244153	0.016975	14.383	< 2e-16 ***
ope1	-0.057492	0.023127	-2.486	0.0129 *
polint1	0.296132	0.028824	10.274	< 2e-16 ***
factor(year)2019	0.465494	0.100556	4.629	3.67e-06 ***
factor(year)2020	0.216453	0.103069	2.100	0.0357 *
factor(year)2021	0.719819	0.098378	7.317	2.54e-13 ***
factor(year)2022	0.470076	0.100209	4.691	2.72e-06 ***
factor(year)2023	0.835566	0.097787	8.545	< 2e-16 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 9889.7 on 9047 degrees of freedom
Residual deviance: 8747.2 on 9034 degrees of freedom
(876 observations deleted due to missingness)
AIC: 8775.2

Number of Fisher Scoring iterations: 5

```
Call:
glm(formula = usetransp_nona ~ dig_mun + ingresos + sex + age +
     SES + education + ope1 + polint1 + factor(year), family = binomial,
     data = EOP)
```

Deviance Residuals:

Min	1Q	Median	3Q	Max
-1.2091	-0.5609	-0.4185	-0.2940	2.7841

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	0.759657	0.658466	1.154	0.2486

dig_mun	1.015367	0.455001	2.232	0.0256 *
ingresos	-0.229258	0.049196	-4.660	3.16e-06 ***
sex	0.179317	0.068344	2.624	0.0087 **
age	-0.019367	0.002117	-9.147	< 2e-16 ***
SES	-0.049404	0.042807	-1.154	0.2485
education	0.154713	0.020866	7.415	1.22e-13 ***
ope1	0.041318	0.028344	1.458	0.1449
polint1	0.377981	0.035918	10.524	< 2e-16 ***
factor(year)2019	-0.522098	0.109244	-4.779	1.76e-06 ***
factor(year)2020	-0.748588	0.112993	-6.625	3.47e-11 ***
factor(year)2021	-0.690029	0.110623	-6.238	4.44e-10 ***
factor(year)2022	-0.706129	0.111782	-6.317	2.67e-10 ***
factor(year)2023	-0.664886	0.112385	-5.916	3.30e-09 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 6751.6 on 9047 degrees of freedom

Residual deviance: 6230.3 on 9034 degrees of freedom

(876 observations deleted due to missingness)

AIC: 6258.3

Number of Fisher Scoring iterations: 5

Call:

```
glm(formula = useother_nona ~ dig_mun + ingresos + sex + age +
    SES + education + ope1 + polint1 + factor(year), family = binomial,
    data = EOP)
```

Deviance Residuals:

Min	1Q	Median	3Q	Max
-1.3337	-0.5572	-0.3845	-0.2534	2.9603

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	0.5762177	0.6767528	0.851	0.3945
dig_mun	3.2273560	0.4794376	6.732	1.68e-11 ***
ingresos	-0.3895317	0.0509400	-7.647	2.06e-14 ***
sex	0.1717579	0.0690155	2.489	0.0128 *
age	-0.0170151	0.0021395	-7.953	1.82e-15 ***
SES	-0.0002817	0.0432472	-0.007	0.9948
education	0.2142378	0.0214771	9.975	< 2e-16 ***
ope1	0.0629350	0.0289257	2.176	0.0296 *
polint1	0.3034842	0.0363462	8.350	< 2e-16 ***
factor(year)2019	0.7547843	0.1213926	6.218	5.04e-10 ***
factor(year)2020	0.0464797	0.1314187	0.354	0.7236
factor(year)2021	0.0444063	0.1306219	0.340	0.7339
factor(year)2022	-0.2278871	0.1385449	-1.645	0.1000 .
factor(year)2023	0.9104954	0.1192620	7.634	2.27e-14 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 6763.3 on 9047 degrees of freedom

Residual deviance: 6024.9 on 9034 degrees of freedom

(876 observations deleted due to missingness)

AIC: 6052.9

Number of Fisher Scoring iterations: 5