Electronic Government and Municipal Executives: the Case of Minas Gerais, Brazil

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Objectives

- In its most **simple form**, e-government refers to the availability of government information and some public services over the internet.

- We evaluate whether there is the **appropriation** of e-government by the 853 Minas Gerais' municipalities, based on the existence of executive branch websites.

- Moreover, we analyze which **variables** could influence the adoption of new ICTs by municipal executive representatives, using an exploratory quantitative study.

Data

- **Dependent variable:** existence of executive branch websites in the 853 Minas Gerais' municipalities (dummy).

- **Independent variables:**

  1) **Structural variables:** HDI–M categories (2000); municipal budget revenue (2007); existence of university (2010); date of the municipality's founding.

  2) **Situational variables:** mayor's party affiliation.

  3) **Public policy:** utilization of the "Integra Minas" Program.

Hypotheses 1, 2 and 3

- **H1:** municipalities with higher HDI-M levels have greater chances to have executive branch websites.

- **H2:** municipalities with higher revenues have greater chances to have websites.

- **H3:** municipalities with universities are more likely to have websites, because universities tend to be connected and the municipality would probably have some sort of connection.

Hypotheses 4, 5 and 6

- **H4:** older municipalities present a higher probability to have websites, because they tend to be more structured.

- **H5:** municipalities governed by leftist parties are more likely to have websites, because these parties (PT) have a discourse to increase popular participation.

- **H6:** municipalities with "Integra Minas" have lower chances to develop their own websites, because this program offers tools to use nICTs.
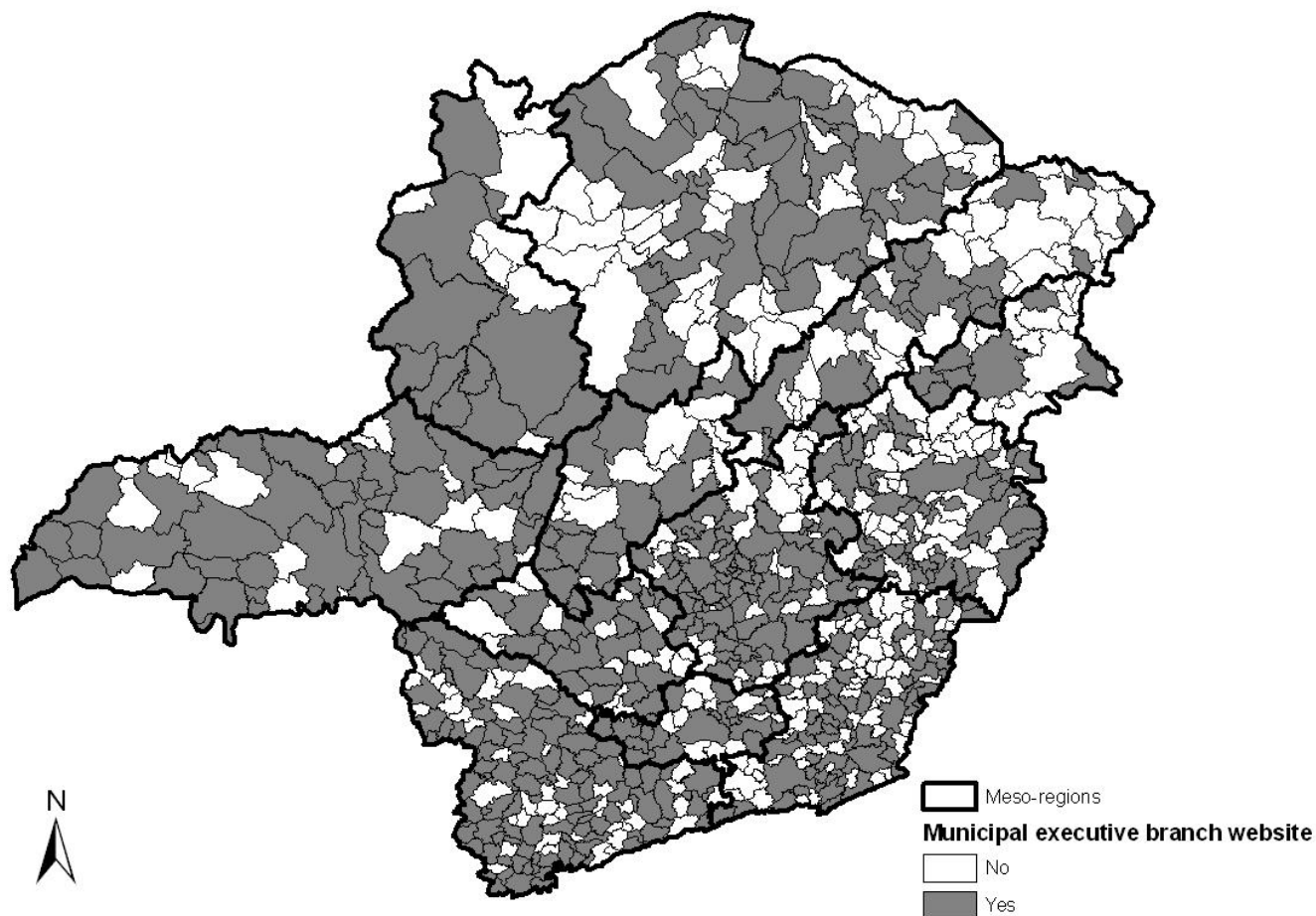
Methodology

- **Descriptive statistical analysis** of selected variables.

- **Spatial distribution of variables** across municipalities using geoprocessing tools.

- Development of **logistic regression models** to explain the existence of municipal executive branch websites.

Municipalities in Minas Gerais

Variables	%	N
Municipal executive branch websites	56.27	480
Universities	28.14	240
Founding prior to 1953	47.48	405
"Integra Minas" Program	13.60	116

Source: (1) Information on the executive branch website, universities, and municipalities' founding year were acquired in online survey, April, 2010. (2) Information about the "Integra Minas" Program was obtained in www.integraminas.mg.gov.br, April, 2010.
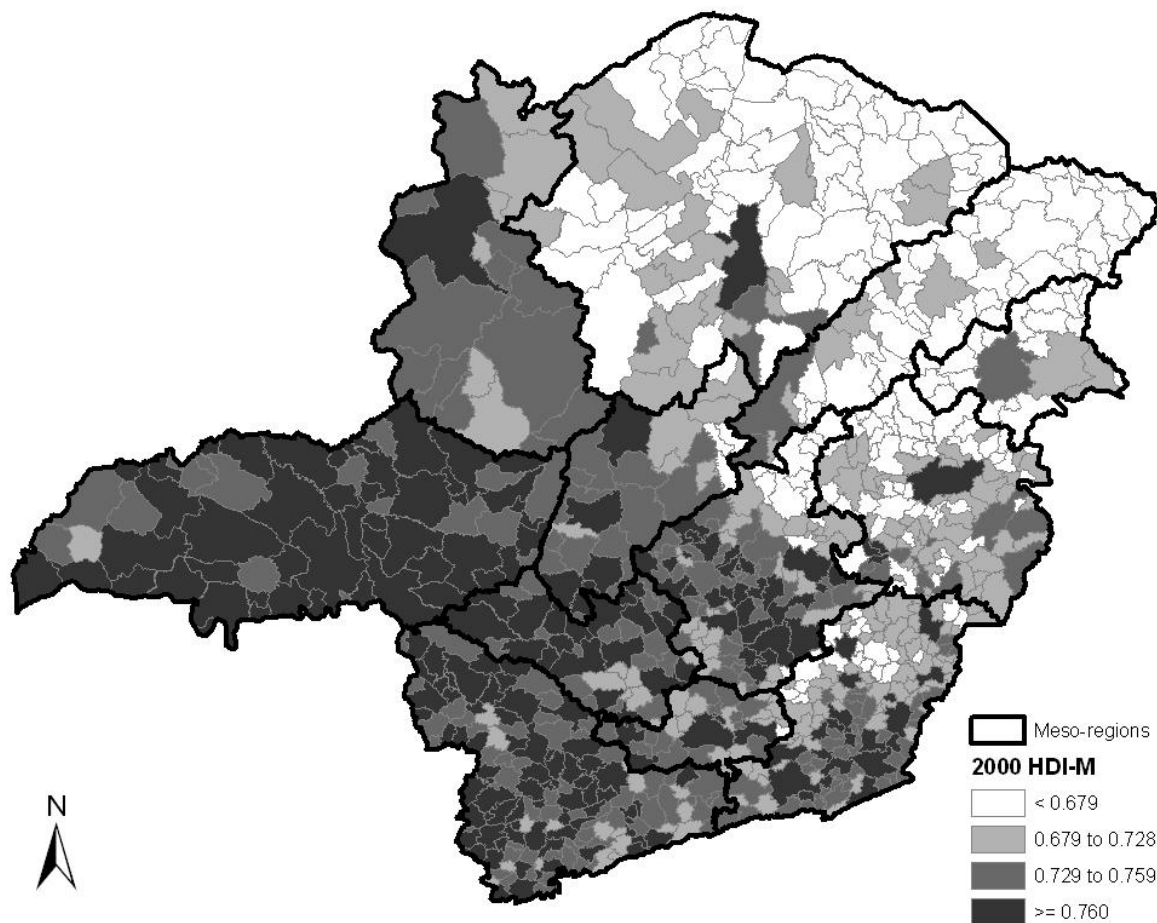
Municipal Executive Branch Websites, 2010

Source: Information on the executive branch website was acquired in online survey, in April, 2010.
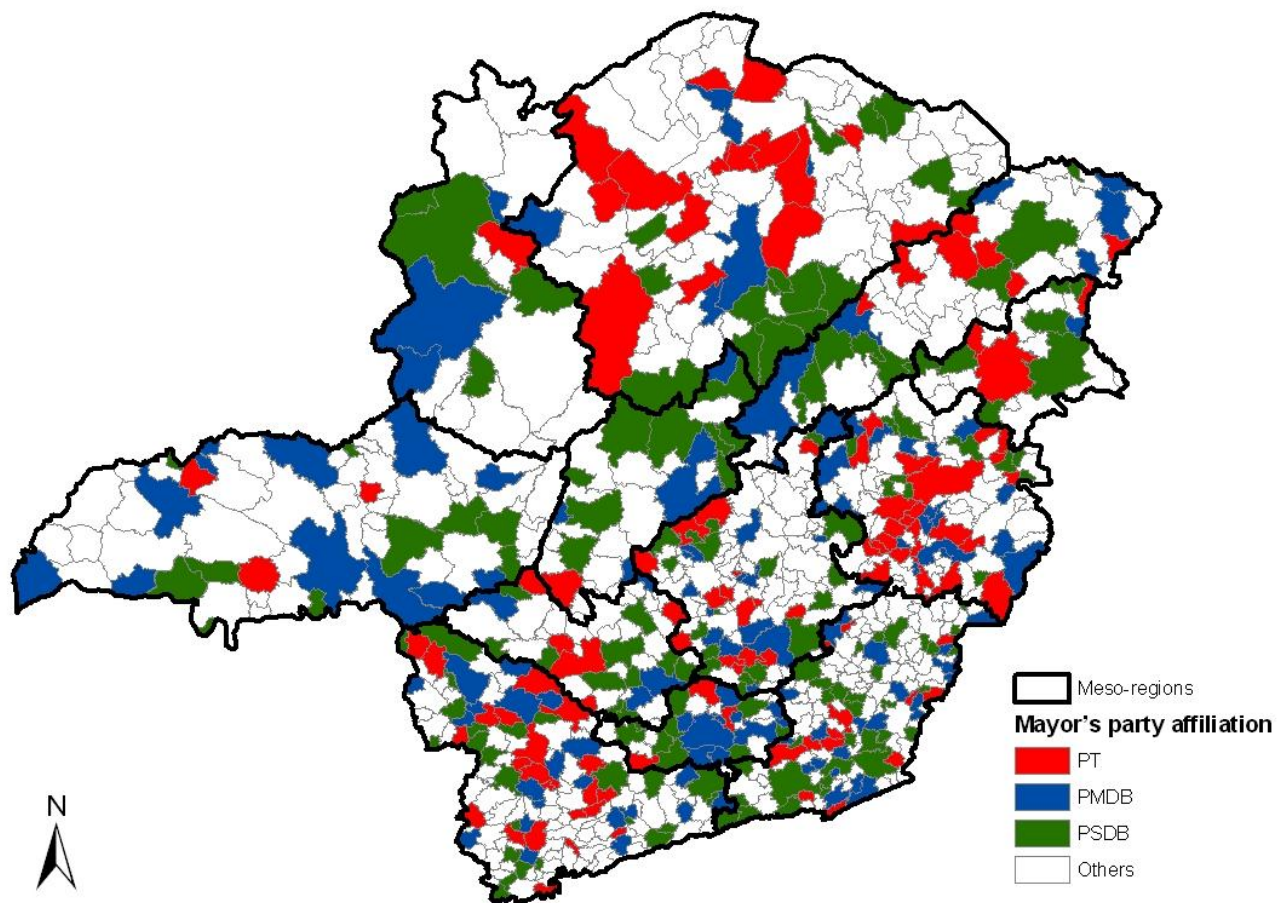
Municipal Human Development Index (HDI–M), 2000

Legend:
- Meso-regions
- **2000 HDI-M**
  - < 0.679
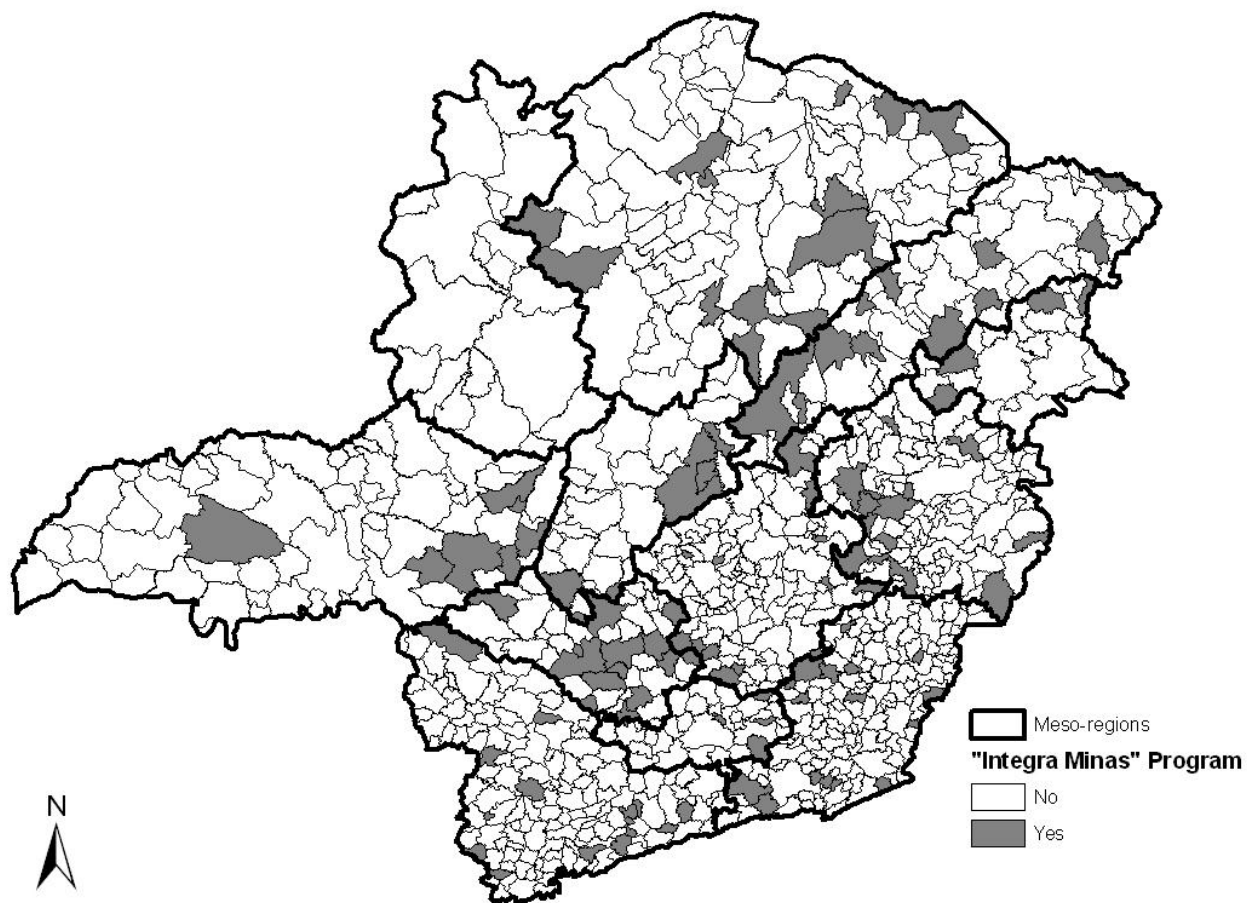 - 0.679 to 0.728
  - 0.729 to 0.759
  - >= 0.760

Source: Human Development Index (HDI) was obtained from the Atlas of Human Development in Brazil, prepared by the United Nations Program for the Development – UNPD (2000).

Mayor's Party Affiliation, 2010

Source: Information about the mayor's party affiliation was obtained on the Superior Electoral Court site (TSE) in April, 2010.

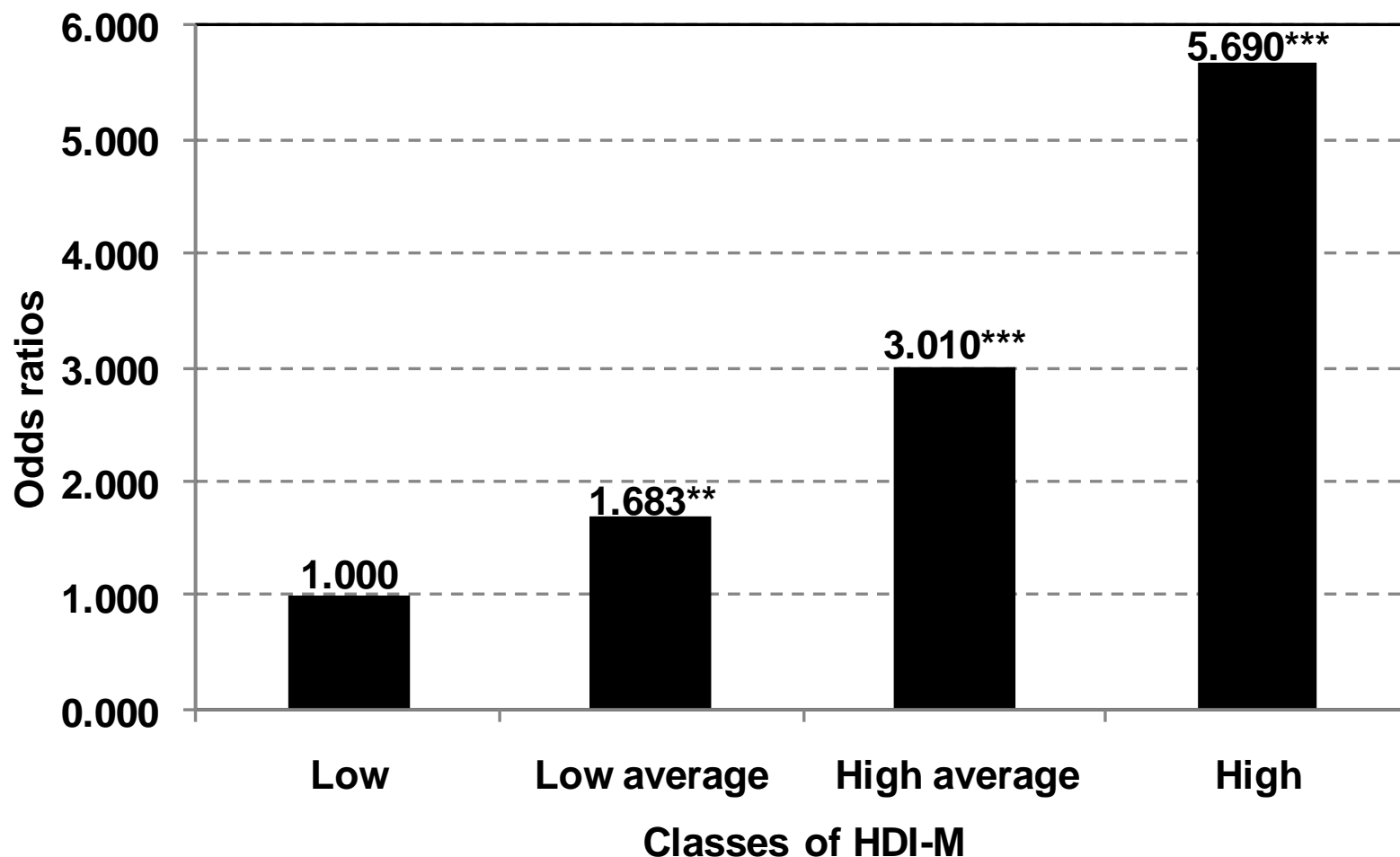# "Integra Minas" Program, 2010

Source: Information on the executive branch website was acquired in the website
www.integraminas.mg.gov.br, in April, 2010.

Averages of Variables by Integra Minas and Municipal Websites

Structural Variables	NO Integra MG NO Website	YES Integra MG NO Website	NO Integra MG YES Website	YES Integra MG YES Website
HDI–M in 2000	0.6967	0.6890	0.7360	0.7437
Log. of budgetary revenue in 2007	15.0342	15.3360	16.1744	16.2111
Existence of university in 2010	0.1447	0.1452	0.3826	0.4259
Founded prior to 1953	0.3280	0.3871	0.5610	0.7407
Municipalities	**311 (83.4%)**	**62 (16.6%)**	**426 (88.7%)**	**54 (11.3%)**

Odds Ratios of Existence of Websites by Classes of HDI–M (H1)

Source: Logistic model, controling for budgetary revenue, existence of university, date of foundation of municipality, mayor's party affiliation, and "Integra Minas" Program.

*** significant at p<0.01; ** significant at p<0.05; * significant at p<0.10.

Other Hypotheses Tested in the Logistic Regression Model

- **H2:** with 1% increase in the **budgetary revenue***** municipalities increase their chances to have site in <u>7.6%</u>.

- **H3:** municipalities with **universities***** have <u>two times</u> more chance to have website than the other ones.

- **H4:** municipalities **founded prior to 1953*** have <u>34%</u> more chance to have website than newer ones.

- **H5:** there was no statistical significance on the difference of having websites among municipalities administered by **PT, PMDB, PSDB or other parties**.

- **H6:** municipalities with **"Integra Minas"**** have <u>40%</u> less chance to have websites than the other ones.

*** significant at p<0.01; ** significant at p<0.05; * significant at p<0.10.

Final Considerations

- This paper sought to analyze a set of secondary data that could influence the adoption of nICTs by **state actors**.

- We intend to apply this analytical model to **other regional and national contexts**.

- This study did not evaluate the **quality of government websites**, which is another interesting field of research.