

Croatian Local Administration

Introduction

The objective of this project is to demonstrate a quantitative analysis of the Croatian local administration which includes local administrative units and incumbents. This will be done by presenting the number of administrative units alongside with number of incumbents within. The dataset (Microsoft Excel tables) was acquired from the Croatian Ministry of Interior website. There are two datasets: the one being from 2017 and other from 2021. Each dataset contains of next columns: county, administrative_unit_type, administrative_unit_name, hq_address, phone_number, fax, e_mail, web_site, name_of_county_municipality_or_city_mayor, name_of_deputy_mayor, name_of_second_deputy_mayor, name_of_minority_deputy_mayor, name_of_president_of_representative_body. 2021 data set is unfortunately still incomplete (regarding the incumbents, only mayors and presidents of the representative body are present).

The plan was to make a new database that will contain the values from both datasets. The data (i.e., Excel tables) were turned into a CSV file and were uploaded to the Table Convert Online (<https://tableconvert.com/>) in order to transform the CSV file into SQL inserts. The inserts were then imported into PostgreSQL (pgAdmin) and tables were made and populated.

After the table creation, functions and views were made to make life easier. There are functions for value inserts for each table and views mostly for joined tables. The point of the DML section is to present the data and counts for every administrative unit which were grouped by regions they belong to. Also, at the end of the DML functions were tested, and tables were selected for data to be exported in R. The imported tables were then used for data visualization, i.e., bar charts simply for counties within their regions to be visually compared regarding the administrative units, incumbents, and minority deputy mayors.

DDL

First the tables for both datasets (2017 and 2021 year) were made. The incumbent columns (e.g., mayor or deputy mayor) were renamed with suffix of the dataset's year (17 and 21) so they can be easily distinguished. After that some values within county column were translated in English. The table Administrative Unit Incumbents is a junction one as it contains year and id columns for administrative unit table and people table. Incumbent function id column was

added for smoother and quicker search for specific person or incumbents. The function_id refers to incumbent's rank:

function name	function id
Mayor	1
Deputy mayor	2
Second deputy mayor	3
Minority deputy mayor	4
President of representative body	5

Out of this table the people table was made. It should be noted that some columns have empty rows means that not every county or municipality or city has a deputy incumbent. Likewise, some values contain more than names, but a specific deputy role (e.g., Rajko Milosevic, Serbian Minority Deputy Mayor). To leave out the deputy role, split function was used (with comma as delimiter). To ease future database maintenance, functions for adding values for each table were made (and tested in DML). At the very end, the view for table join between administrative units and incumbents was made.

DML

In DML section, the queries for statistics were made (mostly count). For every county there is a count of municipality, cities, and incumbents. These queries were exported as csv file in R and were used to make bar charts. For easier data visualization, counties were grouped in four regions they belong to. At the end of the DML section there are few queries that present the comparison of changed and same incumbents through 2017 and 2021 incumbents' mandate. The hypothesis testing was planed (H_0 = There is no significant relationship between the incumbents change and immigration rate in counties), but due to the lack of data (e.g., incumbents tables from earlier years) this, for now, is not possible.

Concepts' translation

English	Croatian
city	grad
city mayor	gradonačelnik
county	županija
county mayor	župan
deputy mayor	zamjenik gradonačelnik, načelnika ili župana
incumbent	aktualni državni službenik
minority deputy mayor	zamjenik iz redova nacionalnih manjina
municipality	općina
municipality mayor	načelnik