results

Jeremy Forbes

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```
library(spdep)
```

```
## Loading required package: sp
```

```
## Loading required package: Matrix
```

```
## Loading required package: spData
```

```
## To access larger datasets in this package, install the spDataLarge
## package with: `install.packages('spDataLarge',
## repos='https://nowosad.github.io/drat/', type='source')`
```

```
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
load("/Users/Jeremy/Documents/R/eechidna-modelling/data/model_df.rda")
load("/Users/Jeremy/Documents/R/eechidna-modelling/data/sp_weights_16.rda")
load("/Users/Jeremy/Documents/R/eechidna-modelling/data/sp_weights_13.rda")
load("/Users/Jeremy/Documents/R/eechidna-modelling/data/sp_weights_10.rda")
load("/Users/Jeremy/Documents/R/eechidna-modelling/data/sp_weights_07.rda")
load("/Users/Jeremy/Documents/R/eechidna-modelling/data/sp_weights_04.rda")
load("/Users/Jeremy/Documents/R/eechidna-modelling/data/sp_weights_01.rda")

fmod16 <- errorsarlm(LNP_Percent ~ .,
  data=(model_df %>% filter(year == "2016") %>% dplyr::select(-c(year, DivisionNm))),
  sp_weights_16, etype="error", method="eigen", interval=c(-1,0.999))

#fmod13 <- errorsarlm(LNP_Percent ~ .,
#  data=(model_df %>% filter(year == "2013") %>% dplyr::select(-c(year, DivisionNm))),
#  sp_weights_13, etype="error", method="eigen", interval=c(-1,0.999))

#fmod10 <- errorsarlm(LNP_Percent ~ .,
#  data=(model_df %>% filter(year == "2010") %>% dplyr::select(-c(year, DivisionNm))),
#  sp_weights_10, etype="error", method="eigen", interval=c(-1,0.999))

#fmod07 <- errorsarlm(LNP_Percent ~ .,
#  data=(model_df %>% filter(year == "2007") %>% dplyr::select(-c(year, DivisionNm))),
#  sp_weights_07, etype="error", method="eigen", interval=c(-1,0.999))

#fmod04 <- errorsarlm(LNP_Percent ~ .,
#  data=(model_df %>% filter(year == "2004") %>% dplyr::select(-c(year, DivisionNm))),
```

```
#  sp_weights_04, etype="error", method="eigen", interval=c(-1,0.999))

#fmod01 <- errorsarlm(LNP_Percent ~ .,
#  data=(model_df %>% filter(year == "2001") %>% dplyr::select(-c(year, DivisionNm))),
#  sp_weights_01, etype="error", method="eigen", interval=c(-1,0.999))
```

Results

```
stargazer::stargazer(fmod16)
```

% Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
% Date and time: Fri, Mar 22, 2019 - 10:41:10

Interpreting the model

- Print the model output
- Correlation coefficient
- Characteristics always affecting vote
- Changing characteristics

Diagnostics

- Goodness of fit
- Residuals: GLS residuals should be normal (QQ-plot)
- Outliers: – Leverage: Hat values (X) – Influence: Cook's distance

Electorates that are very different to their neighbours

- Residuals vs weighted neighbours residuals
- Socio-demographics that are quite different?

$$\mathbf{r_j} = \hat{\mathbf{u}} + \hat{\beta}_j \boldsymbol{X}_j$$

where

$$\hat{\mathbf{u}} = (\mathbf{I_n} - \hat{\rho} \cdot \mathbf{W})\hat{\mathbf{v}}$$

where

$$\hat{\mathbf{v}} \sim N(\mathbf{0}, \sigma^2 \cdot \mathbf{I_n})$$

Table 1:

	Dependent variable:
	LNP_Percent
AusCitizen	−1.923
	(2.629)
Born_Asia	−2.004
	(1.950)
Born_MidEast	−1.313
	(1.372)
Born_SE_Europe	−1.284
	(0.875)
Born_UK	−1.648*
	(0.903)
BornElsewhere	0.879
	(4.155)
Buddhism	1.427
	(1.111)
Christianity	5.135**
	(2.194)
CurrentlyStudying	−0.191
	(1.008)
DeFacto	−11.234***
	(2.250)
DiffAddress	7.005***
	(1.325)
Distributive	1.695
	(1.069)
Extractive	6.080***
	(1.204)
Indigenous	4.224***
	(1.227)
Islam	2.955*
	(1.544)
Judaism	2.014***
	(0.618)
ManagerAdminClericalSales	4.481***
	(0.912)
Married	−1.980
	(2.344)
MedianAge	3.247**