

# Who supports the AKP?

## Mapping the Global Dimension of Policy Annual Conference

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### Introduction

The Justice & Development Party in Turkey (AKP) has dominated the municipal, parliamentary, and presidential elections in Turkey since its foundation in 2002 and up to date. Several works have attempted to explain this phenomenon, but studied several reasons unconnectedly and excluded other key explanatory factors. This study, therefore, looks at *who supports the AKP?* And, *what explains the support for AKP?*

The literature hypothesizes that voters' religiosity, ideology, economic optimism, employment, ethnicity, social class/income, education, gender, and age determine the voting behavior. Yet, in the Turkish scenario, it could be problematic and unclear to specify which of those have the key influence, and which are minor as well as what associations and interdependencies can be found among them.

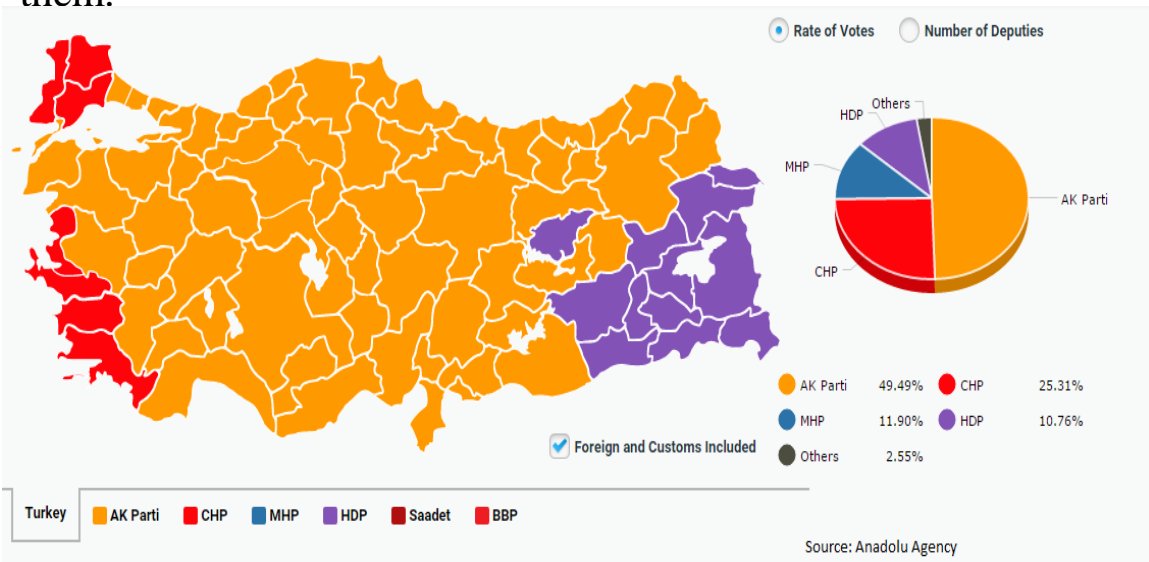


Figure 1. The 2015 elections' results in Turkey showing the domination of the AKP geographically.

### Main Hypotheses

1. People who are religious tend to vote for the AKP Party
2. People who are conservative tend to vote for the AKP Party

### Other Hypotheses

1. People who have high economic optimism for AKP
2. Kurdish people less vote for the AKP Party
3. Women less vote for the AKP Party
4. People who are highly educated less vote for the AKP Party
5. Upper class people less vote for the AKP Party
6. Young people less vote for AKP Party
7. Young and well educated people less vote for the AKP Party

### Description of Data

• Data obtained from Worlds Views Survey website; a survey conducted between 2011 until 2015 and tackled peoples' views worldwide. The following variables have been identified, recorded and used as indicators in this study:

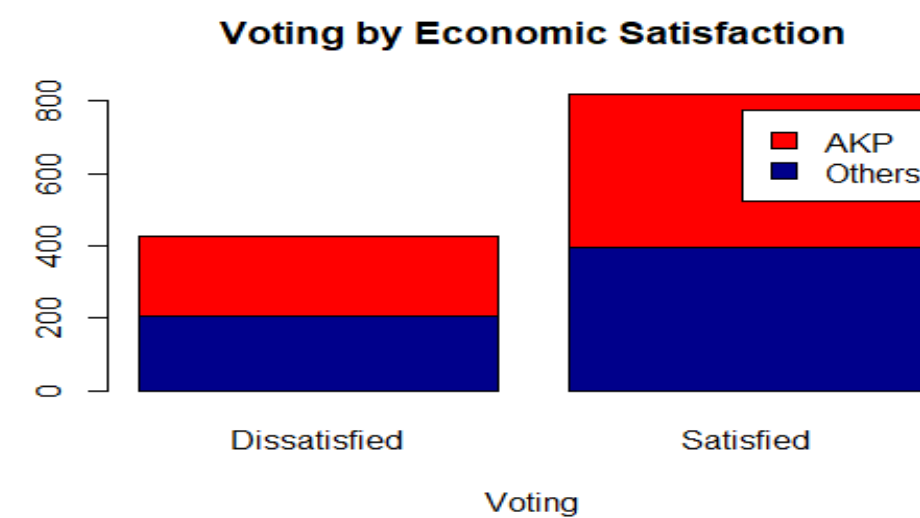
Variable	Recoded	Description
V228	AKPsupprot	Vote for Who?
V146	Religiosity	Pray Frequency
V95	Ideology	Ideology Scale
V59	EconomicOp	Economic Satisf.
V247	Ethnicity	Language @ home
V240	Gender	Sex
V229	Employment	Employment Status
V248	Education	Highest Education
V239	Class	Income
V242	Age	Age

### Data Challenges

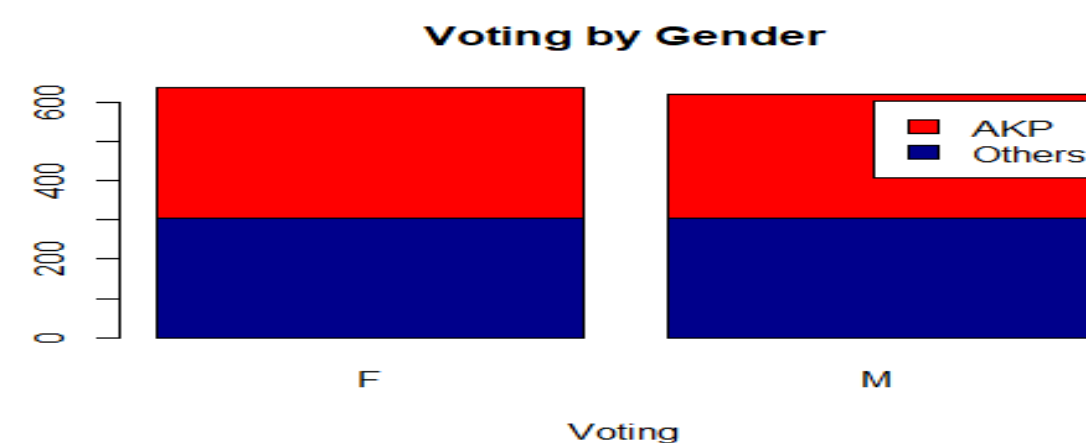
- Creating a subset for only Turkey of 1605 observations extracted from the main data warehouse of over 100 countries
- No question found about the respondents' ethnicity, so first language is used as direct indicator to ethnicity
- Missing values have been replaced either by the medians, and in some cases, mice computation code is used to compute replacement

### Visual Results

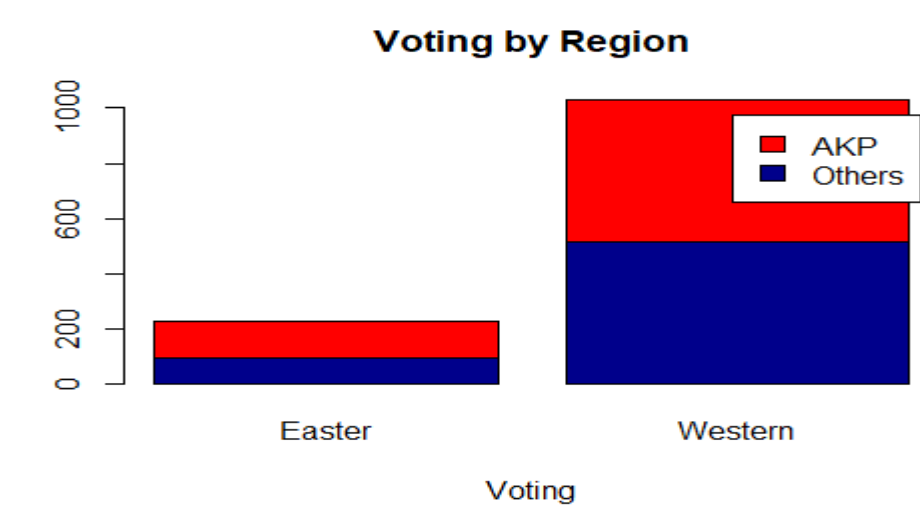
- Economic Satisfaction & Voting behavior



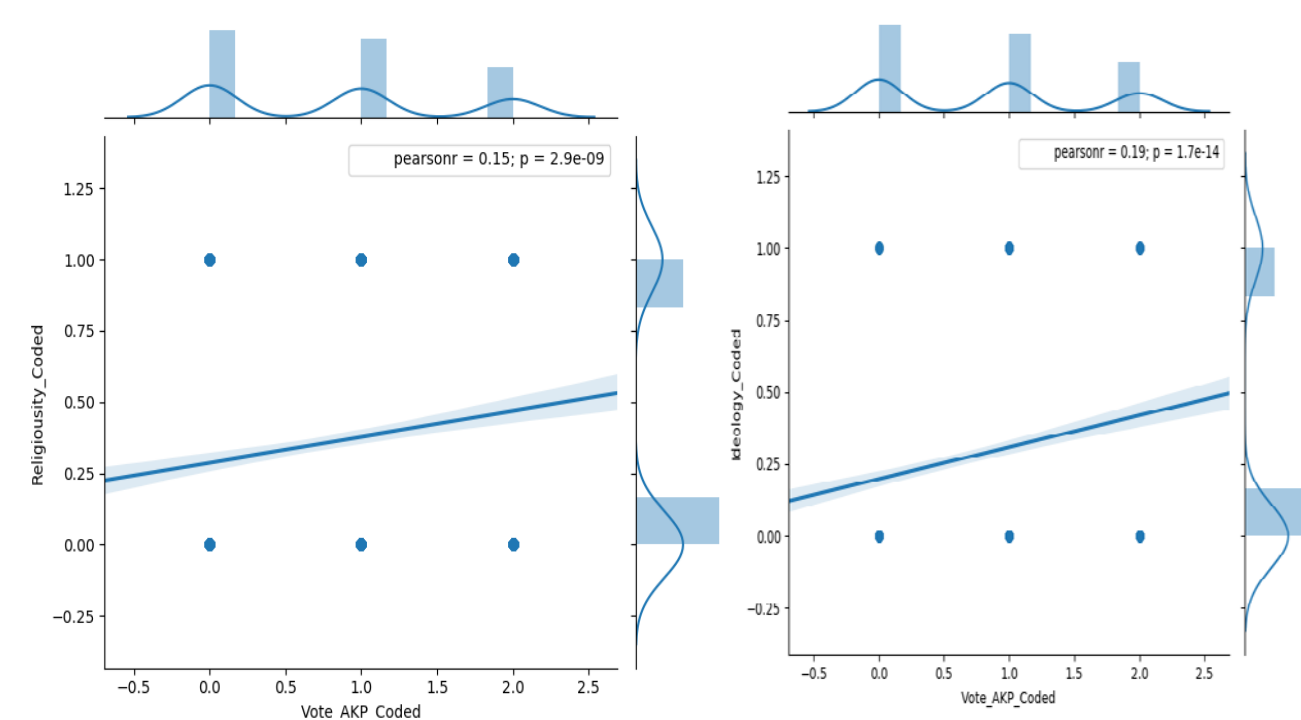
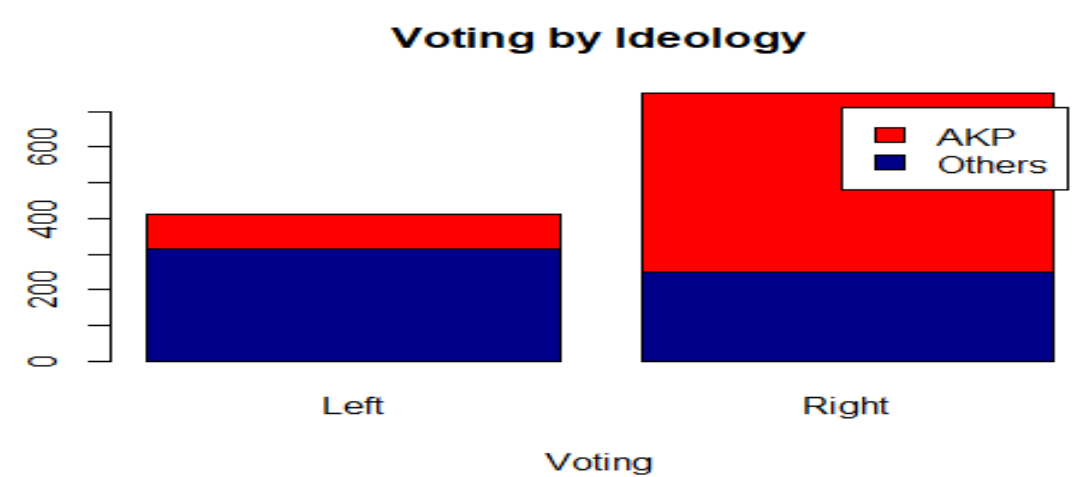
- Gender and Voting behavior



- Region and Voting behaviour



- Voting by Ideology



### Initial Logistic Model

Generalized Linear Model Regression Results						
Dep. Variable:	Vote_AKP_Coded	No. Observations:	1605			
Model:	GLM	Df Residuals:	1590			
Model Family:	Binomial	Df Model:	14			
Link Function:	logit	Scale:	1.0000			
Method:	IRLS	Log-Likelihood:	nan			
Date:	Thu, 04 Apr 2019	Deviance:	nan			
Time:	13:00:04	Pearson chi2:	4.59e+18			
No. Iterations:	100	Covariance Type:	nonrobust			
	coef	std err	z	P> z	[0.025	0.975]
Intercept	5.607e+15	5.82e+06	9.63e+08	0.000	5.61e+15	5.61e+15
C(Religiosity_Coded)[T.1]	5.608e+14	3.7e+06	1.52e+08	0.000	5.61e+14	5.61e+14
C(Economic Satisfaction_Coded)[T.1]	-1.292e+14	4.49e+06	-2.88e+07	0.000	-1.29e+14	-1.29e+14
C(Ideology_Coded)[T.1]	2.346e+16	3.84e+06	6.11e+09	0.000	2.35e+16	2.35e+16
C(Employment_Coded)[T.1]	9.103e+14	4.3e+06	2.12e+08	0.000	9.1e+14	9.1e+14
C(Social_Class_Coded)[T.1]	6.424e+14	5e+06	1.28e+08	0.000	6.42e+14	6.42e+14
C(Social_Class_Coded)[T.2]	1.551e+14	4.37e+06	3.55e+07	0.000	1.55e+14	1.55e+14
C(Income_Coded)[T.1]	-1.934e+14	3.64e+06	-5.31e+07	0.000	-1.93e+14	-1.93e+14
C(Income_Coded)[T.2]	2.654e+14	8.32e+06	3.19e+07	0.000	2.65e+14	2.65e+14
C(Sex_Coded + Age_Coded)[T.1]	-2.252e+14	5.47e+06	-4.12e+07	0.000	-2.25e+14	-2.25e+14
C(Sex_Coded + Age_Coded)[T.2]	6.867e+13	5.39e+06	1.27e+07	0.000	6.87e+13	6.87e+13
C(Sex_Coded + Age_Coded)[T.3]	-4.644e+14	6.62e+06	-7.02e+07	0.000	-4.64e+14	-4.64e+14
C(Ethnicity_Coded)[T.1]	5.762e+13	6.82e+06	8.45e+06	0.000	5.76e+13	5.76e+13
C(Education_Coded)[T.1]	-4.996e+15	4.68e+06	-1.07e+09	0.000	-5e+15	-5e+15
C(Education_Coded)[T.2]	-5.792e+15	5.27e+06	-1.1e+09	0.000	-5.79e+15	-5.79e+15

### Machine Learning Models

#### LogisticRegression

```
Out[327]: LogisticRegression(C=1.0, class_weight=None, dual=False, fit_intercept=True, intercept_scaling=1, max_iter=100, multi_class='ovr', n_jobs=1, penalty='l2', random_state=None, solver='liblinear', tol=0.0001, verbose=0, warm_start=False)

In [328]: regressor.score(X_test,y_test)### 0.55 KNN
Out[328]: 0.526774595267746
```

```
In [341]: clf = GridSearchCV(logistic, hyperparameters, cv=5, verbose=0)
```

```
In [342]: best_model = clf.fit(X_train, y_train.ravel())
```

```
In [343]: best_model.score(X_train, y_train.ravel())
```

```
Out[343]: 0.5523698773867331

In [344]: print('Best Penalty:', best_model.best_estimator_.get_params()['penalty'])
Best Penalty: l2
```

```
In [345]: print('Best C:', best_model.best_estimator_.get_params()['C'])
Best C: 7.742636826811269
```

#### KNN

```
KNeighborsClassifier(algorithm='auto', leaf_size=30, metric='minkowski', metric_params=None, n_jobs=1, n_neighbors=5, p=2, weights='uniform')
```

```
In [208]: classifier.score(X_test,y_test)
```

```
Out[208]: 0.5024875621890548
```

```
GridSearchCV(cv=None, error_score='raise', estimator=KNeighborsClassifier(algorithm='auto', leaf_size=30, metric='minkowski', metric_params=None, n_jobs=1, n_neighbors=5, p=2, weights='uniform'), fit_params={}, iid=True, n_jobs=1, param_grid={'n_neighbors': [4, 5], 'leaf_size': [1, 3], 'algorithm': ['auto', 'kd_tree'], 'n_jobs': [-1]}, pre_dispatch='2*n_jobs', refit=True, scoring=None, verbose=0)
```

```
In [313]: model.score(X_train,y_train.ravel())
```

```
Out[313]: 0.6047381546134664
```

```
In [461]: model = GridSearchCV(knn, param_grid=parameters)
```

```
...: model.fit(X_train,y_train.ravel())
```

```
...: model.score(X_train,y_train.ravel())
```

```
Out[461]: 0.6217788861180382
```

#### Random Forest

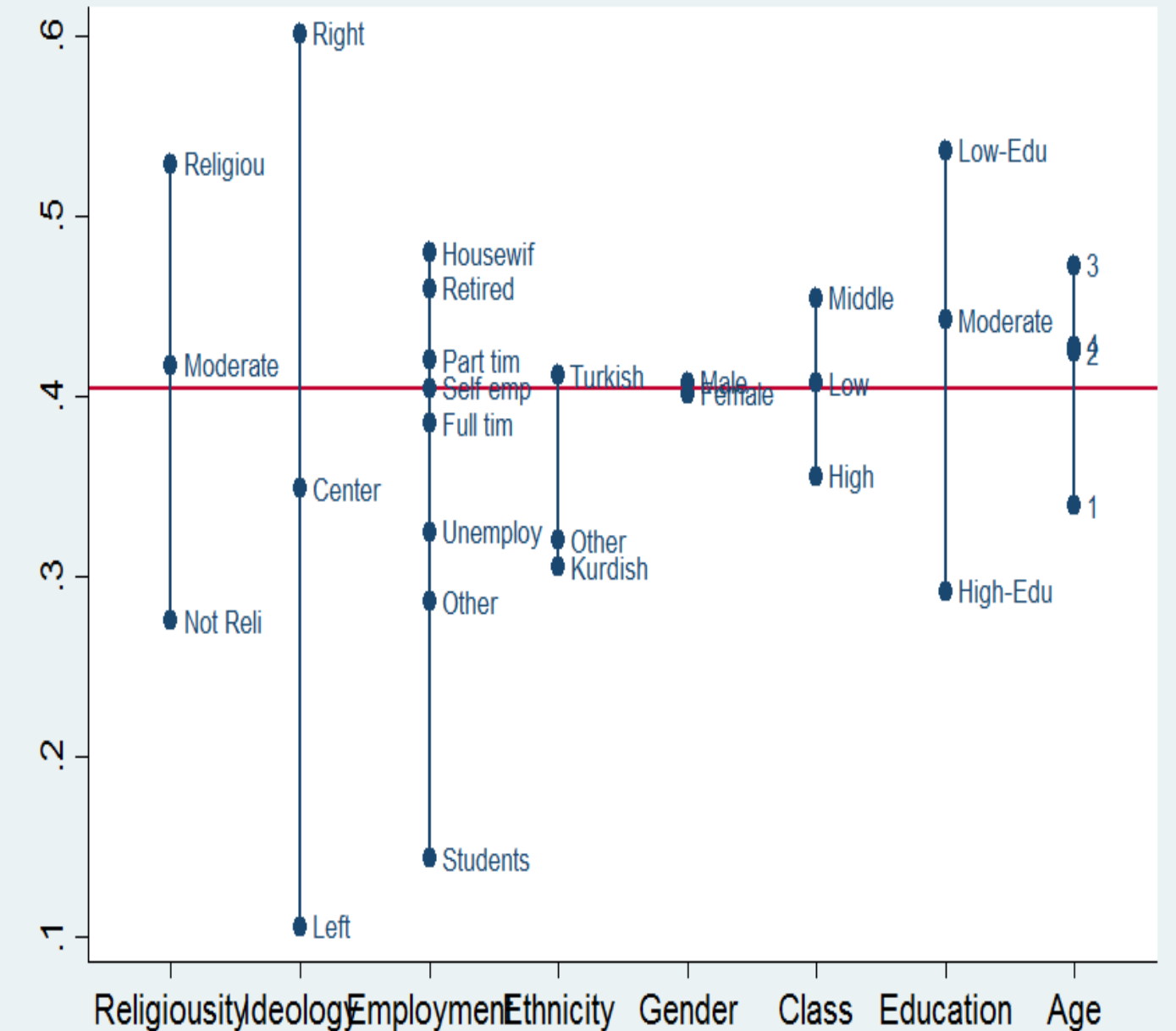
```
RandomForestClassifier(bootstrap=True, class_weight=None, criterion='entropy', max_depth=None, max_features='auto', max_leaf_nodes=None, min_impurity_decrease=0.0, min_impurity_split=None, min_samples_leaf=1, min_samples_split=2, min_weight_fraction_leaf=0.0, n_estimators=10, n_jobs=1, oob_score=False, random_state=0, verbose=0, warm_start=False)
```

```
In [357]: classifier.score(X_test,y_test)### score .64
```

```
Out[357]: 0.48756218905472637
```

### Conclusion

#### Means of AKPSupport (Which party would you vote for)



• The results of this study support the hypothesis that voters who are more religious and conservative in Turkey are more likely to vote for the AKP party.

• However, this study emphasizes other factors associated with the voting behavior and probably influence it in Turkey. It provides new insights about other categories that probably will not vote for the AKP despite their religious and ideological positions.

• Students and youth people are less to vote for the AKP Party. This is a potential window for future research.

• Housewives in Turkey are more likely to vote for the AKP, despite the part of literature that argue that women are less to vote with the conservative parties.

• Not only old retiring people are more likely to vote for the AKP, but also middle-age and middle class people with moderate or low educational qualifications.

• An excellent fit model of voters to support the AKP are people who conservative, religious, over 30, middle class, and un-highly educated Turkish.

Model	Model Score	GridSearch Score
Logistic Regression	0.526	0.55
KNN	0.502	0.621
Random Forest	0.487	0.613
SVM	0.525	0.592