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THREE ESSAYS ON ECONOMIC ANALYSIS OF VOTER AND PARTY BEHAVIORS

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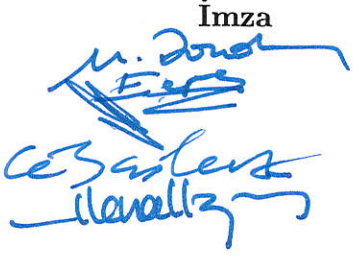

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ÖZ

SEÇMEN VE PARTİ DAVRANIŞLARININ İKTİSADİ ANALİZİ ÜZERİNE ÜÇ DENEME

Sedef Şen

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Bu tez birbirinden bağımsız üç bölümden oluşmaktadır. İlk iki bölümde seçmen davranışları, son bölümde ise parti davranışları incelenmiştir. İlk bölümde, İngiltere'deki seçmenlerin borsada meydana gelen değişimler için hükümeti sorumlu tutup tutmadığı araştırılmıştır. Güncel ekonometrik yaklamlaşımlardan yararlanılarak, borsa ile hükümet memnuniyet düzeyi arasında anlamlı bir ilişkinin olduğu gösterilmiştir. Borsada meydana gelen şoklar, negatif ve pozitif şoklar olarak ayrıldığında bu ilişkinin hâlâ geçerli olduğuna vurgu yapılmıştır. Sorumluluk hipotezi, eşbütünleşme ve asimetrik nedensellik analizleri çerçevesinde test edilmiştir. İkinci bölümde, hem iktisadi hem de iktisadi olmayan faktörler göz önüne alınarak Türkiye için iktisadi oylama fonksiyonu tahmin edilmiştir. Mekânsal ekonometri araçlarına başvurularak, bir ildeki AKP oyları ile o il'e komşu illerin AKP oy oranları arasında pozitif bir ilişki olduğu ortaya çıkarılmıştır. Tek bir açıklayıcı değişkendeki değişimin herhangi bir ilde değişmesi sadece söz konusu ildeki AKP oy oranlarını değil; o il'e komşu illerin AKP oy oranlarını da etkilemektedir. Son bölümde, iktisadi globalleşmeden partilerin politika pozisyonu üzerinde bir etkiyi tanımlayan model gösterilmiştir. Hem sağ hem de sol eğilimli partilerin sol içerikli iktisadi söylemlerinde iktisadi globalleşmenin bir fonksiyonu olarak artan bir politikleştirme bulunmuştur.

Anahtar kelimeler: Menkul Kıymetler Borsası, Hükümet Memnuniyet Oranı, Eşbütünleşme, Asimetrik Nedensellik, Globalleşme, Parti Pozisyonu, Lineer Karma Model, Coğrafya, Mekansal Bağımlılık, İktisadi Oylama.

ABSTRACT

THREE ESSAYS ON ECONOMIC ANALYSIS OF VOTER AND PARTY BEHAVIORS

Sedef Sen

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This thesis consists of three independent chapters. Voter and party behaviors are analyzed in the first two chapters and final chapter, respectively. The first chapter examines whether voters in the UK hold the government responsible for change in the stock market. The chapter presents significant relationship between the stock exchange and government satisfaction rating in the UK, utilizing up-to-date econometric approaches. It highlights that this relationship still holds when the stock exchange shocks are separated as negative and positive. The responsibility hypothesis is tested in the context of co-integration and asymmetric causality tests. The second chapter estimates an economic vote function that includes both economic and non-economic factors in Turkey. Employing the spatial econometric methods, it is found that vote share of AKP in one-province exhibits a positive relationship with AKP vote share in neighboring provinces. A change in a single explanatory variable in a particular province not only affects the vote share of AKP in that province itself, but also in neighboring provinces. The final chapter presents a model that describes an affect from economic globalization to policy position of parties. It is found that politicization of leftist economic policies within rightist and leftist parties are increasing as a function of economic globalization.

Keywords: Stock Market, Government Satisfaction Rating, Co-integration, Asymmetric Causality, Globalization, Party Position, Linear Mixed Model, Geography, Spatial Dependence, Economic Voting.

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CONTENTS

LIST OF TABLES

Page Number

LIST OF FIGURES

Page Number

ABBREVIATIONS

ADF	:Augmented Dickey Fuller
AKP	:Adalet ve Kalkınma Partisi- Justice and Development Party
ARCH	:Autoregressive Conditional Heteroskedasticity
CBOE	:Chicago Board Options Exchange
CCR	:Canonical Co-integrating Regression
CMP	:Comparative Manifesto Project
CSGR	:Center for the Study of Globalization and Regionalization
CPI	:Consumer Price Index
FDI	:Foreign Direct Investment
FMOLS	:Fully Modified Ordinary Least Squares
FTSE	:Financial Times Stock Exchane
GDP	:Gross Domestic Product
GSR	:Government Satisfaction Rating
LSE	:London Stock Exchange
NUTS	:The Nomenclature of territorial units for statistics
TSI	:Turkish Statistical Institute
VAR	:Vector Autoregressive
VIX	:Volatility Index
VP	:Vote and Popularity

1 INTRODUCTION

This thesis aims to explain the economic factors that have affect on voter and party behaviors. For this purpose, three independent essays are studied for understanding of voter and party behavior issues.

Chapter one attempts to answer the question of whether stock market performance affects the government satisfaction rating in the long run in a sample period spanning 1984:Q1 to 2013:Q2 in the United Kingdom. Both the equilibrium relationship and the causality relationship between stock market performance and government satisfaction rating are examined. The results indicate that the voters are sensitive to the economic shocks and hold responsible the government. The empirical results confirm the responsibility hypothesis.

Chapter two examines the factors that affect the ruling Justice and Development Party (AKP) vote share in 2014 Local election in Turkey by estimating an economic vote function that includes both economic and non-economic factors. Studies on vote share of parties generally ignore spatial dependence among the observations. Employing the spatial econometric methods, it is found that vote share of AKP in one-province exhibits a positive relationship with AKP vote share in neighboring provinces. Consequently, a change in a single explanatory variable in a particular province not only affects the vote share of AKP in that province itself, but also in neighboring provinces. Based on the LM statistics, it is conducted spatial lag model and show that there is significant and positive effect of growth rate, female population, urban rate, religiosity and previous local election vote share of AKP on AKP vote share in 2014 local election.

Chapter three attempts to answer the question of whether economic globalization

affects the economic policy position of leftist and rightist parties. In order to test it, is 51 countries are considered between 1970 and 2012 and find positive and statistically reliable effects from economic globalization to policy position of parties. Based on the econometric results, politicization of leftist economic policies within rightist and leftist parties are increasing as a function of economic globalization. Furthermore, these effects are robust in the alternative modeling and estimation procedures and alternative measures of economic globalization. It is also concluded that there is a significant between-country variability in the effects independent variables on dependent variables.

Each chapter, with its own introduction, literature review, data and variables, methodology, empirical results and conclusion, contributes to the constitution of the whole thesis.

2 DOES STOCK MARKET PERFORMANCE AFFECT THE GOVERNMENT SATISFACTION RATING IN THE UNITED KINGDOM?

In this study, we attempt to answer the question of whether stock market performance affects the government satisfaction rating in the long-run in a sample period spanning 1984:Q1 to 2013:Q2 in the United Kingdom. We examine both the equilibrium relationship and the causality relationship between stock market performance and government satisfaction rating. The results indicate that the voters are sensitive to the economic shocks and hold responsible the government. The empirical results confirm the responsibility hypothesis.

2.1 Introduction

The economics and election nexus play a substantial role in the design of politicians' own policies. Before declaring their own party programs, politicians want to know the influence of these programs on voter behavior. Politicians who notice the sensitiveness of voters to economic change form their policies accordingly. For this purpose, the economic voting theory is analyzed from different perspectives.

There is a significant amount of literature investigating the relationship between economics and elections (Nannestad and Paldam (1994); Lewis-Beck and Stegmaier (2013)). Even if a tentative consensus is reached, information on the magnitude and direction of this relationship is still contradictory. There may be some factors to explain why the research on this case obtained varied results. All countries have their own cultural, political, economical and religious

backgrounds. Under these circumstances, the voters consider their own country's background and decide which parties they support. Hence, voter behavior in any country may be observed differently in another country.

The researchers working on economic voting have referred to distinct econometric methodologies, time periods, sample sizes and variables. As Gronke and Newman (2003) have discussed, researchers tried to determine the relationship between economics and elections using more sophisticated econometric techniques, different model specifications, functional forms, longer time series and rich datasets. In addition to these, shocks and structural breaks can be the underlying cause of the relationship between economics and elections in only one period holding to the other periods. As such, the results of the studies can differ quite drastically from each other. Some studies in literature related to the economics and elections nexus focus on a particular economic variable due to the significance of that economic variable on voter behavior. Recent studies show that the stock market index is included in the vote and popularity functions (Gwilym and Buckle (1994); Hudson et al. (1998); Schwartz et al. (2008); Fauvelle-Aymar and Stegmaier (2013)).

Linkage between stock market and election has been analyzed within two frameworks, economic voting and political business cycles. In the economic voting literature stock exchange has been formed as an independent variable in models. In other words, scholars who concentrate on economic voting theory in terms of stock market, attend to specify sensibility of voter behavior to the changing in the stock exchange market. As for political business cycle literature, the stock exchange has been used as a dependent variable in order to determine the fluctuations in its results from some factors such as election time, electoral system and parties' ideologies (Thompson and Ioannidis (1987); Manning (1989); Gwilym and Buckle (1994); Vuchelen (2003)).

In this study, we try to explain whether voter behavior depends on stock market performance rather than focusing on stock market fluctuations, boom and boost namely. Political business cycle is not relevant to the current analysis and therefore it is not considered further. Whether stock market performance might theoretically change presidential approval is discussed by Fauvelle-Aymar and

Stegmaier (2013). They indicate,

> "... market figures are reported more frequently than other macroeconomic indicators, and the media interpret the market 's direction in terms of the nation 's economic health and what it means for American 's pocketbook." "... responsibility for stock market performance can be assigned to the President. ... since the government has policy instruments to steer the economy."

In this context, the London Stock Exchange (LSE), which is among the largest stock markets in the world, might play an important role in voter behavior. We applied the LSE market indicators to reveal the relationship between stock exchange and government satisfaction rating and considered the responsibility hypothesis as the following: *The voters hold the government responsible for the changing economy (responsibility hypothesis).*

The responsibility hypothesis explains whether the voters hold the government responsible for economic events. If the performance of the economy goes well the voter supports the incumbent party (Nannestad and Paldam, 1994) or vice versa. This is called classic reward-punishment paradigm of economic voting in the literature. Responsibility hypothesis initiates the economic voting literature (Paldam and Lewis-Beck, 2000) and other hypothesizes (e.g.Kick the Rascals Out Asymmetry or grievance asymmetry (Mueller (1970)), sociotropic and egotropic hypothesis (Kinder and Kiewiet, 1979), culture hypothesis (Miller and Listhaug, 1984) and so on) contribute to progression of the economic voting literature (Nadeau et al., 2010).

This study contributes to the general literature on economic voting in the following ways as: It is the first study dealing with the relationship between the stock exchange and government satisfaction rating in UK. Although the UK is one of the leading stock markets, it is surprising that economic voting literature has largely ignored this possible relationship. We particularly prefer the UK since elections are held regularly; it has consistent time series data; there are no military interventions; there are no party closures or frequent changes in election laws (Akarca and Tansel, 2007) and it has a developed financial market and reliable political environment. According to Nannestad and Paldam (1994)

"the responsibility pattern only appears to make sense for governments that can actually rule as government normally can in US and UK". There are also some studies investigated in this context for other developed countries (Fauvelle-Aymar and Stegmaier (2013); Schwartz et al. (2008); Chong et al. (2011)). Different from these studies, we applied an up-to-date econometric approach by taking into account structural breaks in an effort to reveal if our results correspond with others under these circumstances. There is no study to date, to the best of our knowledge, evaluating the vote and popularity function within the concept of long-run equilibrium with structural break. Furthermore, this study is the first to investigate how positive and negative shocks in the economic variables affect the government satisfaction rating and the sensibility of voters to the shocks.

This paper is structured as follows: Section 2.2 provides a review of the literature; Section 2.3 outlines the data and variables; Section 2.4 shows the methodology and discusses the empirical results; and finally, Section 2.5 concludes.

2.2 Literature Review

Since Kramer (1971)'s profound work on economic voting, the literature related to economic voting has progressed from different perspectives and is still dynamically in progress. One of the reasons why research is so abundant with respect to economic voting may be that economic voting is a field of study for economists, political scientists, sociologists and econometricians. In other words, since economic voting is at a junction of distinct fields, the literature reaches enormous dimensions. Summing up the economic voting literature looks like an attempt to do the impossible. Fortunately, there are some substantial surveys of literature on voting and popularity functions, which are termed VP-functions (Nannestad and Paldam (1994); Gronke and Newman (2003); Lewis-Beck and Stegmaier (2013)).

Researchers have used a variety of macroeconomic variables in aggregate vote functions (Geys and Vermeir (2008); Schwartz et al. (2008); Chong et al. (2011); Fauvelle-Aymar and Stegmaier (2013); Wisniewski (2009)). These variables are important guidelines for politicians, since they can observe the factors affecting

the voters' decisions. Politicians may find out what the voters are thinking about, and therefore how they are inclined to vote and respond to campaign stimuli (Berlemann and Enkelmann (2014)). One of these factors to be considered in vote-popularity functions is stock market. In a few recent studies we might observe that this relationship has been tested within the framework in VP-functions. Schwartz et al. (2008) is one of the first researchers that handled the political advantage of a volatile market. They utilized the Chicago Board Options Exchange's (CBOE) Volatility Index (VIX)[1] as proxy variable of market volatility, and found that the expected volatility of the market is highly related to Presidential approval in the United States. Their primary contribution is to introduce the VIX index in the VP-function as a measure of uncertainty (Schwartz et al., 2008). Chong et al. (2011) indicated how market volatility affects presidential job approval ratings in the U.S. Unlike Schwartz et al. (2008), they distinguished the economic and non-economic components of market volatility and used Eta® model variables.[2] Their results indicate that there is not aggregated market volatility but rather disaggregated market volatility that has a causal effect on presidential job approval ratings (Chong et al., 2011)

One of the latest research studies on the relationship between presidential approval and stock exchange was conducted by Fauvelle-Aymar and Stegmaier (2013). They indicated that approval is highly sensitive to the stock market's acceleration or deceleration. That is, falling in the stock market index reduces presidential approval whereas acceleration in the index increases U.S. presidential approval (Fauvelle-Aymar and Stegmaier, 2013). As well as these studies, there are also a few studies showing that voter's preferences related to parties could change according to their patrimony such as ownership of home, apartment, business, farm, stock, saving etc. (Lewis-Beck and Nadeau, 2011).

[1]The Chicago Board Options Exchange's (CBOE) Volitility Index (VIX) is called investor fear gauge.

[2]Eta® model includes 18 economic factor: FTSE 100 index, gold index, corporate bond (BAA) yield, consumer price index, short term government bond yield, intermediate-term government bond yield, long term government bond yield, Tokyo Stock Exchange index, the Euro exchange rate, agricultural exports, housing starts, monetary base, M2 money supply, corporate cash flow, unemployment rate, auto sales, new durable goods orders, and energy prices. It is developed by the Center for Computationally Advanced Statistical Techniques (Chong et al. (2011).

Lewis-Beck and Nadeau (2011) called this patrimonial economic voting and indicated, "A citizen's standing in the economic structure shapes policy preference and, in turn, party preferences.". They found out having more patrimony directs voters to favor conservative (Nadeau et al. (2010); Lewis-Beck and Nadeau (2011); Stubager et al. (2013)). In addition, there are some scholars discussed the UK stock market and elections. Thompson and Ioannidis (1987)'s early study demonstrated that there is limited evidence that the UK stock market responds to voter opinion polls. Gwilym and Buckle (1994) indicated that there is a relationship between opinion polls and FTSE 100 share index for the 1992 UK election. Hudson et al. (1998) determined that the literature on the UK stock market shows that results are mixed regarding the question of whether the market is responding to opinion polls (Hudson et al., 1998).

2.3 Data and Variables

The quarterly data used in this study covers the period from 1984:Q1 to 2013Q2 for the UK. The variables in this study include government satisfaction rating (GSR), the financial times stock exchange (FTSE) 100 index, consumer price index (CPI), unemployment rate (UR), and gross domestic product per head (GDP). GSR is a dependent variable; FTSE, UR, CPI and GDP are independent economic variables. Government satisfaction rating is provided from the Ipsos MORI Research Company. The question asked to the people is: "Are you satisfied or dissatisfied with the way the Government is running the country?". We use satisfaction rating in percentages, and GSR is used as a proxy of Prime Minister approval rating. An increasing in GSR rating might induce an increase in votes in favor of the government. The FTSE 100 index is obtained from the National Statistics Office of the UK. Because the FTSE 100 index is one of the most used indicators of the UK stock market, we applied the FTSE100 as a proxy of the UK stock market.[3] CPI and UR are retrieved from the Federal Reserve Bank of St. Louis (2015). The UR is a seasonally adjusted data set. For GDP, data used the chained volume measures.[4] All the variables are expressed in natural logarithm

[3] "FTSE 100=1000 at end of Dec 1983" (ons.gov.uk).

[4] "With chained volume measures, instead of updating the base year every 5 years, it is updated every year, meaning that, in practice, every series to be presented in real terms is

form in the empirical analysis, and correlate in the expected direction with the dependent variable of government satisfaction ratings.

2.4 Methodology and Empirical Results

We applied the unit root, co-integration and asymmetric causality approach in order to test our hypothesis. Though our data set contains long time period, starting to the analysis by ruling out structural break in the series may be induce misleading results. As such, we applied unit root and co-integration tests with structural break. Additionally, we also refer the asymmetric causality test in an effort to separate the impact of shocks in the variables into positive and negative.

2.4.1 Unit Root Test

In the first step, we used the unit root test with structural break based on Zivot and Andrews (2002) statistics in order to determine the integrated order of the series. The conventional unit root test, which is not considered the structural break, such as augmented Dickey Fuller (ADF) and Phillips Peron (PP), may not capture accurate integration degree of series. In order to eliminate this trouble, we conducted Zivot-Andrews (ZA) unit root test. It is important to know whether the series have I(1), because the Westerlund and Edgerton (2007) co-integration method needs to be series I(1). ZA unit root test with structural break takes the break fraction to be endogenous. Thus, it is not removed shocks from the noise function unlike the Perron (1989) approach that is taken the break fraction to be exogenous. ZA test null hypothesis for the three model of Perron (1989) [5] is that

$$y_t = \mu + y_{t-1} + e_t.$$

It is used the following three regression equations to test for a unit root Zivot and Andrews (2002):

estimated both in current prices and prices of the previous year" (ons.gov.uk).

[5]Perron (1989) developed the three models in the following: Model (A): $y_t = \mu + d\mathrm{D}(\mathrm{T_B})_t + y_{t-1} + e_t$; Model(B): $y_t = \mu_1 + y_{t-1} + (\mu_2 - \mu_1)\mathrm{DU}_t + e_t$; Model (C) $y_t = \mu_1 + y_{t-1} + d\mathrm{D}(\mathrm{T}_B)_t + (\mu_2 - \mu_1)\mathrm{DU}_t + e_t$ where $\mathrm{D}(\mathrm{T}_B) = 1$ if $t = \mathrm{T}_B + 1$, 0 otherwise; $\mathrm{DU} = 1$ if $t > \mathrm{T}_B$, 0 otherwise. Model (A) is called crash model which is permits an exogenous change in the level of the series; Model (B) is called changing model which allows an exogenous change in the rate of growth, and Model (C) is called changing in level and slope admits both changes (Zivot and Andrews, 2002).

$$y_t = \hat{\mu}^A + \hat{\theta}^A \mathrm{DU}_t(\hat{\lambda}) + \hat{\beta}^A t + \hat{\alpha}^A y_{t-1} + \sum_{j=1}^{k} \hat{c}_j^A \Delta y_{t-j} + \hat{e}_t$$

$$y_t = \hat{\mu}^B + \hat{\beta}^B t + \hat{\gamma}^B \mathrm{DT}_t^*(\hat{\lambda}) + \hat{\alpha}^B y_{t-1} + \sum_{j=1}^{k} \hat{c}_j^B \Delta y_{t-j} + \hat{e}_t$$

$$y_t = \hat{\mu}^C + \hat{\theta}^C \mathrm{DU}_t(\hat{\lambda}) + \hat{\beta}^C t + \hat{\gamma}^C \mathrm{DT}_t^*(\hat{\lambda}) + \hat{\alpha}^C y_{t-1} + \sum_{j=1}^{k} \hat{c}_j^C \Delta y_{t-j} + \hat{e}_t$$

where $\mathrm{DU}_t(\lambda) = 1$ if $t > \mathrm{T}\lambda$, 0 otherwise; $\mathrm{DT}_t^* : (\lambda) = t - \mathrm{T}\lambda$ if $t > \mathrm{T}\lambda$, 0 otherwise. λ, $\lambda = \mathrm{T_B/T}$, is the breakpoint. In the decision stage reject the null hypothesis of a unit root if $\inf_{\lambda \in \wedge} t_\alpha^*(\lambda) < \kappa_{\mathrm{inf},\alpha}^i$, i=A,B,C where $\kappa_{\mathrm{inf},\alpha}^i$, denotes the size α left-tail critical value from the asymptotic distribution of $\inf_{\lambda \in \wedge} t_\alpha^i(\lambda)$ (Zivot and Andrews, 2002).

Table 2.1 summarizes break in level results of the ZA unit root test.

Table 2.1: Unit Root Test

Level			
Variables	t-Statistic	Breakpoint	Break Date
CPI	-3.401	33 (λ: 0.27)	1992Q1
FTSE	-4.479	73 (λ:0.61)	2002Q1
GDP	-4.505	97(λ:0.82)	2008Q1
GSR	-4.551	53(λ:0.44)	1997Q1
UR	-4.518	97(λ: 0.82)	2008Q1
First Difference			
Δ CPI	-8.936	65 (λ: 0.55)	2000Q1
ΔFTSE	-10.36	76 (λ: 0.64)	2002Q4
ΔGDP	-11.22	75(λ:0.62)	2002Q3
ΔGSR	-10.83	44(λ:0.37)	1994Q4
ΔUR	-5.461	35 (λ:0.29)	1992Q3

Notes: ZA critical values for break in level model are -4.58, -4.80, -5.34 at 10%, 5% and 1% levels.

Considering the critical values of the test statistics, the null hypothesis of a structural unit root cannot be rejected for the series at the 5% significant level.[6] All series are integrated to an order of one.

[6]When we use the breakpoint dates obtaining endogenously in ZA approach in Chow test (1960) as an exogenously we verify that the all the breakpoint dates provided from ZA refer the structural change in the specified breakpoints. Chow test F-Statistics for CPI, FTSE, GDP, GSR and UR are 105.1544 (0.000), 55.562 (0.000), 41.5664 (0.000) , 24.727 (0.000) and 5.417 (0.021), respectively. P-values are in the paranthesis.

2.4.2 Co-integration Test

In the second step, because it is guaranteed that all the variables have I(1), we can employ the Westerlund and Edgerton (2007) co-integration test procedure. The conventional co-integration tests, i.e. Johansen (1991), Johansen and Juselius (1994), Pesaran et al. (2001), rule out the structural break in the series. So, "the conventional tests may incorrectly accept the null hypothesis of no co-integration when there is a break under the alternative hypothesis" (Westerlund and Edgerton, 2007). To ease this problem we applied WE test for co-integration with structural breaks. There are some advantages of WE such as the null hypothesis of no co- integration allows for deterministic trends and structural change and complies with heteroskedastic and serially correlated errors (Westerlund and Edgerton, 2007). In level shift case data generating process (DGP) is described with the following equation (Westerlund and Edgerton, 2007):

$$y_t = \alpha + \tau \mathrm{t} + \delta \mathrm{D}_t + x_t^{'}\beta + z_t$$

where " α represents the intercept before the break and δ represents the change in the intercept at the time of the shift. If we let T_b denote the location of this shift, then $\mathrm{D}_t = 1$ if $\mathrm{t} > \mathrm{T}_b$ and zero otherwise" (Westerlund and Edgerton, 2007). The LM-based statistics are derived and denoted ϕ_s and t_s.[7] The test results are demonstrated in Table 2.2

Table 2.2: Co-integration Test

	T-Stat	Break Date
t_s	-4.944	58(1998Q2)
ϕ_s	-79.558	

Critical Value 10%: -2.75.

The calculated t_s and ϕ_s statistics are more negative than the critical value of -2.75 at 10% level. The null hypothesis of no co-integration with structural break cannot be accepted when GSR is the dependent variable. That is, there is a

[7]There is a detail information in Westerlund and Edgerton (2007) related to how the statistics are measured and critical values.

long-run relationship among variables for the UK.

2.4.3 Long-Run Co-integration Coefficient Test

Since the variables are co-integrated, the long-run model can be estimated. To estimate long-run estimators we use fully modified ordinary least squares (FMOLS) developed by Phillips and Hansen (1990) and canonical co-integrating regression (CCR) developed by Park (1992). The FMOLS method has some advantages, such as producing reliable estimates for a small sample size, correcting for endogeneity and serial correlation and asymptotically eliminating sample bias (Khundrakpam and Ranjan (2010)). Canonical co-integrating regression (CCR) is a procedure developed by Park (1992) for statistical inference in co-integrating regressions formulated with the transformed data. CCR is a nonparametric method for the estimation of and testing of co-integration vectors in models with integrated processes or with order one (Park, 1992). Though CCR and FMOLS procedures are quite similar, there is some diversity between these methods as Park (1992) mentioned:

> "... former selects a canonical regression among the class of models representing the same co-integrating relationship, the latter modifies variables and estimates directly to eliminate the existing nuisance parameters. Operationally, the CCR method concentrates on the data transformations, but Phillips and Hansen use the transformations of both the data and estimates (Park, 1992)".

Table 2.3 presents long-run estimator test results.

Table 2.3: Long-run Coefficient Test

Variables	FMOLS	CCR
C	41.54(0.000)	40.33(0.000)
CDU	0.887(0.000)	0.896 (0.000)
FTSE	0.543(0.061)	0.500 (0.075)
CPI	0.032(0.011)	0.320(0.010)
UR	-0.760(0.003)	-0.070(0.003)
GDP	-4.910(0.000)	-4.740(0.000)

In order to estimate the long-run coefficient we consider the break date

(1998Q2)[8] provided from the WE co-integration test result and called the variable, "CDU". This known point in the co-integration test means that the co-integration vector is time-variant, whereas the standard test for co-integration is time-invariant under the alternative hypothesis (Gregory and Hansen (1996)). C represents the intercept before the break, the coefficient of CDU represents the change in the intercept at the time of the shift and coefficients of remaining variables indicate the slope parameters. The slope coefficients are in expected direction and statistically significant for FTSE and UR variables. However, the signs of GDP and CPI did not correspond to with our expectations.[9] A one-percentage point increase in FTSE generates a 0.5 percentage point increase in government satisfaction rating in the long-run. Furthermore, a one-percentage point decrease in UR generates a 0.76 percentage point decrease in government satisfaction rating in the long-run.

2.4.4 Asymmetric Causality Test

Asymmetric causality test improved by Hatemi-j (2012) allows for asymmetry in the causality testing by using the cumulative sums of positive and negative shocks. It is assumed that the impact of a positive shock is the same as the impact of a negative shock in the previous conventional causality tests such as Granger (1969) and Toda and Yamamoto (1995) (Hatemi-j, 2012). Hatemi-J said: "In the existing literature, there is no separation between the causal impact of positive and negative shocks.". Supposing that we investigate the casual relationship between two integrated variables y_{1t} and y_{2t} defined as the following random walk process (Hatemi-j, 2012):

[8] One of the reasons why 1998Q2 is determined by WE test may be the dot-com bubble case. It is called also "stock market boom" in the U.S. Between 1990 and the peak in mid-2000, U.S. equity prices increase nearly fivefold. The stock market boom in the rest of the world is quite impressive by historical standards (Kraay and Ventura, 2007). The other one may be the Asian financial crisis.

[9] It is accepted in the economic voting literature that FTSE and GDP act in the same direction with the presidential approval rating whereas CPI and UR act in the opposite direction. This means increasing (decreasing) the FTSE or GDP increases (decreases) the presidential approval rating. However, increasing (or decreasing) CPI or UR decreases (increases) the presidential approval rating. By and large, theoretically and empirically, the effects of GDP and FTSE are expected to be positive, and that of CPI and UR are to be negative.

$$y_{1t} = y_{1t-1} + \epsilon_{1t} = y_{10} + \sum_{i=1}^{t} \epsilon_{1i}$$

$$y_{2t} = y_{2t-1} + \epsilon_{2t} = y_{20} + \sum_{i=1}^{t} \epsilon_{2i}$$

where $t = 1, 2, ..., T$, the constants $y_{1,0}$ and $y_{2,0}$ are initial values; ϵ_{1i} and ϵ_{2i} white noise disturbance terms. Positive and negative shocks are defined as the following:

$$\epsilon_{1i}^{+} = \max(\epsilon_{1i}, 0)$$

$$\epsilon_{2i}^{+} = \max(\epsilon_{2i}, 0)$$

$$\epsilon_{1i}^{-} = \min(\epsilon_{1i}, 0)$$

and

$$\epsilon_{2i}^{-} = \min(\epsilon_{2i}, 0)$$

respectively. Therefore, one can express

$$\epsilon_{1i} = \epsilon_{1i}^{+} + \epsilon_{1i}^{-}$$

and

$$\epsilon_{2i} = \epsilon_{2i}^{+} + \epsilon_{2i}^{-}.$$

It follows that

$$y_{1t} = y_{1t-1} + \epsilon_{1t} = y_{1,0} + \sum_{i=1}^{t} \epsilon_{1i}^{+} + \sum_{i=1}^{t} \epsilon_{1i}^{-}$$

and

$$y_{2t} = y_{2t-1} + \epsilon_{2t} = y_{2,0} + \sum_{i=1}^{t} \epsilon_{2i}^{+} + \sum_{i=1}^{t} \epsilon_{2i}^{-}.$$

Finally, the positive and negative shocks of each variable can be defined in a cumulative form as

$$y_{1t}^{+} = \sum_{i=1}^{t} \epsilon_{1i}^{+}, y_{1t}^{-} = \sum_{i=1}^{t} \epsilon_{1i}^{-}, y_{2t}^{+} = \sum_{i=1}^{t} \epsilon_{2i}^{+}$$

and

$$y_{2t}^{-} = \sum_{i=1}^{t} \epsilon_{2i}^{-}.$$

The next step is to test the causal relationship between these variables by using the following vector autoregressive model of order p, VAR (p):[10]

$$y_t^{+} = v + A_1 y_{t-1}^{+} ... A_p y_{t-1}^{+} u_1^t,$$

where y_t^{+} is the $2x1$ vector of variables, v is the vector of intercepts and u_t^{+} is the vector of error terms. The matrix A_r is a $2x2$ matrix of parameters for lag order $r(r = 1, ..., p)$. In order to determine the optimal lag order (p) he suggests the following information criterion: [11]

$$\text{HJC} = \ln(|\hat{\Omega}_j|) + j(\frac{n^2 \ln \text{T} + 2n^2 \ln(\ln \text{T})}{2\text{T}}),$$

$j = 0, ..., p$ where $|\hat{\Omega}_j|$ is the determinant of estimated variance-covariance matrix of error terms in the VAR model based on lag order j , n is the equation number of VAR model and T is the number of observations. After selecting the optimal lag order, the following hypothesis is tested: $H_0 =$ the row w, column k element in A_r equals zero for $r = 1, ..., p$. This method provides valid inference even if the variables are non-normally distributed with potential ARCH volatility. To remedy ARCH problem bootstrap critical values are produced (Hatemi-j, 2012). The results of asymmetric causality test are presented in Table 2.4.

Based on these results, there is no causality relationship between GSR shocks and UR shocks. Either positive or negative cumulative UR and GSR shocks do not affect the government satisfaction rating or the unemployment rate, respectively. The null hypothesis that positive cumulative FTSE shocks do not Granger cause the positive cumulative GSR shocks can be rejected at a 5% significance level. Furthermore, negative cumulative FTSE shocks do Granger cause the negative cumulative GSR shocks at a 5% level. This means that positive and negative FTSE shocks influence the government satisfaction rating.

[10] Hatemi-j (2012) assumed that $y_t^{+} = (y_{1t}^{+}, y_{2t}^{+})$ in his paper. He also remarked that for negative shocks the vector is used. Other combinations are also possible.

[11] Hatemi-j (2012) indicates that this information criterion is robust to autoregressive conditional heteroskedasticity (ARCH).

Table 2.4: Asymmetric Causality Test

Null Hypothesis	Test Value	p-values	Results
$GSR^{+} \neq> UR^{+}$	3.238	0.356	None
$UR^{+} \neq> GSR^{+}$	1.996	0.573	
$GSR^{+} \neq> FTSE^{+}$	5.699	0.127	Uni-directional
$FTSE^{+} \neq> GSR^{+}$	8.166	0.043	
$GSR^{+} \neq> CPI^{+}$	3.239	0.198	Uni-directional
$CPI^{+} \neq> GSR^{+}$	12.60	0.002	
$GSR^{+} \neq> GDP^{+}$	22.32	0.000	Uni-directional
$GDP^{+} \neq> GSR^{+}$	2.806	0.423	
$GSR^{-} \neq> UR^{-}$	3.743	0.291	None
$UR^{-} \neq> GSR^{-}$	1.827	0.609	
$GSR^{-} \neq> FTSE^{-}$	5.459	0.141	Uni-directional
$FTSE^{-} \neq> GSR^{-}$	8.865	0.031	
$GSR^{-} \neq> CPI^{-}$	4.352	0.113	Uni-directional
$CPI^{-} \neq> GSR^{-}$	12.02	0.002	
$GSR^{-} \neq> GDP^{-}$	21.96	0.000	Uni-directional
$GDP^{-} \neq> GSR^{-}$	2.791	0.425	

The results are compatible with our anticipations. Voters in the UK are sensitive to either positive or negative cumulative shocks in FTSE. There is unidirectional causality from positive cumulative GSR shocks to positive cumulative GDP shocks and from negative cumulative GSR shocks to negative cumulative GDP shocks. This means that positive and negative GSR shocks are Granger cause the positive and negative GDP shocks, respectively. Finally, there is unidirectional causality from positive cumulative CPI shocks to positive cumulative GSR shocks and from negative cumulative CPI shocks to negative cumulative GSR shocks.

2.5 Conclusion

The empirical results confirm that the *responsibility hypothesis* is found in the long-run estimation. Accordingly, variables FTSE and UR are in an expected direction and statistically significant. These results show that an individual's sensibility on the UR and FTSE exists in the long-run. It means voters in the UK hold the government responsible for change in the UR and FTSE. Asymmetric causality test results reveal that positive and negative FTSE shocks influence the government satisfaction ratings in the UK. These findings are in line with

the findings of Fauvelle-Aymar and Stegmaier (2013), indicating that approval is sensitive to the stock market' s acceleration or deceleration. Nadeau et al. (2010) also showed that stockholding and stock market changes affected approval as well. Furthermore, Schwartz et al. (2008) found that expected volatility of the stock market is highly related to presidential approval. One interesting implication of this work is that voters are sensitive to the economic shocks and hold the government responsible. Therefore, politicians and their advisors should focus on both reducing the effects of shocks, and providing improvement in the economic variables that voters have considered.

3 SPATIAL DEPENDENCE IN VOTES AND ECONOMIC VOTING: EVIDENCE FROM 2014 LOCAL ELECTION IN TURKEY

This study examines the factors that affect the ruling Justice and Development Party (Adalet ve Kalkınma Partisi-AKP) vote share in 2014 Local election in Turkey by estimating an economic vote function that includes both economic and non-economic factors. Studies on vote share of parties generally ignore spatial dependence among the observations. Employing the spatial econometric methods, we find that vote share of AKP in one province exhibits a positive relationship with AKP vote share in neighboring provinces. Consequently, a change in a single explanatory variable in a particular province not only affects the vote share of AKP in that province itself, but also in neighboring provinces. Based on the LM statistics, we conduct spatial lag model and show that there is significant and positive effect of growth rate, female population, urban rate, religiosity and previous local election vote share of AKP on AKP vote share in 2014 local election.

3.1 Introduction

Economic voting is a concept showing the relationship between government and economy. Downs (1957)'s theories of rationality in politics is referred to as the theoretical starting point and they became the idea known as the responsibility hypothesis in time. According to the responsibility hypothesis, the voters hold the government responsible for the development in the economy. In other words, the voter rewards the government for good economic performance and punishes it for bad economic performance (Nannestad and Paldam (1994); Lewis-Beck and Stegmaier (2013)). Researchers have investigated the economic voting from

different perspectives until today (Paldam and Lewis-Beck (2000); Lewis-Beck and Stegmaier (2000); Duch (2007); Nannestad and Paldam (1994); Lewis-Beck and Stegmaier (2013)). The economic voting studies tend to progress in two main dimensions: *Macro and Micro* studies. In macro studies, a few macro variables are often employed such as unemployment rate, inflation and growth rate (Nannestad and Paldam, 1994). In micro studies, researchers concentrate on the individual economic voting function in light of a survey conducted with the voters. Whether the voters are sociotropic or egotropic and whether they are retrospective or prospective are the most commonly investigated questions in those studies.[1]

Recent studies have revealed that there are many non-economic factors that have an influence on voter preferences as well as the economic factors (Hellwig (2008); Ward et al. (2015); Baslevent et al. (2005); Akarca and Tansel (2015)) such as religiosity, gender, age, schooling rate and migration.

In this study, we consider both economic and non-economic factors that have an effect on voters who vote for the ruling Justice and Development Party in the 2014 local election in Turkey. There are several reasons to take into consideration the AKP in our analysis as following: It has been the dominant party in the Turkish party system since 2002; it achieves in attracting voters from most segments of the political spectrum (Baslevent and Akarca, 2008); it is the first party since 1954 to raise its vote share after ruling a full legislative term (Akarca and Baslevent, 2009); during 2002-2014, AKP both came on the top in every election and ruled in single-party government while it also managed to raise its vote share each time (Akarca, 2014).

We regard the local election instead of the general election both due to the fact that there are a few studies focusing on particularly local elections in Turkey (Akarca, 2009) and local elections are viewed crucial by politicians in expanding their electoral popularity in the national political area (İncioğlu, 2002). Furthermore, control of municipalities of sprawling metropolises, such as Istanbul, Ankara and Izmir, provides a party with considerable political influence (İncioğlu, 2002).

[1]For the meaning of those concepts, see Nannestad and Paldam (1994) and Lewis-Beck and Stegmaier (2013).

AKP was established in 2002 and has experienced three local elections since that time, including the 2004, 2009 and 2014 local elections. Since our study is based on regional economic voting we need to apply the data at the regional level, but the research on voting behavior at the regional level suffers from the limited availability of data. Turkish Statistical Institute (TSI) provides the regional data mainly after 2005. In addition, due to the global financial crisis in 2009, we avoid considering the 2009 local election. For those reasons, we consider the 2014 local election made in Turkey.

The contribution of this paper to the literature is twofold. First, we estimate a model for Turkey using aggregate-level regional data observed at the NUTS 3 (The Nomenclature of territorial units for statistics) level (81 provinces) in the period 2013. Just like many previous studies, Turkish economists and political scientists have investigated the validity of economic voting in Turkey at the country or individual level (Akarca and Tansel (2006); Baslevent et al. (2004); Baslevent et al. (2005); Baslevent et al. (2009); Akarca and Tansel (2006)). However, to the best of our knowledge, there are few research on the existence of economic voting from a regional perspective, using aggregate-level regional data, for Turkey (Kalaycioglu (2009); Toros (2012); Çarkoğlu and Hinich (2006)).The second contribution of this paper is the attention to spatial dependence among the observations. Although the characteristics of the electoral base of the AKP have previously been dealt with in literature, we believe that the empirical methodology makes this article's contribution a valuable one.

3.2 Literature Review and Hypotheses

Since Gerald Kramer (1971)'s profound work on economic voting, the literature related to economic voting has progressed from different perspectives and is still dynamically in progress. One of the reasons why research is so abundant with respect to economic voting may be that economic voting is a field of study for economists, political scientists, sociologists and econometricians. In other words, since economic voting is at a junction of distinct fields, the literature reaches enormous dimensions. Summing up the economic voting literature looks like an attempt to do the impossible. Fortunately, there are some substantial

surveys of literature on voting and popularity functions, which are termed VP-functions. Nannestad and Paldam (1994)'s paper is the first survey study that has explicated to the VP[2]-functions in detail. They showed how the VP literature had taken form until 1994. Lewis-Beck and Stegmaier (2013) indicate that according to Google Scholar, Nannestad and Paldam (1994)'s survey on economic voting has been cited over 450 times. Additionally, Lewis-Beck and Stegmaier (2013) have recent revisited the VP-function after years. We do not attempt to offer a comprehensive review of this literature. We focus on the more recent research efforts in this area by considering Turkish example. Some of the macro level studies made in Turkey as following: Akarca and Tansel (2006) discussed 1995 Turkish parliamentary election and showed the relationship between the government's economic performance and the vote share of political parties. They found that Turkish voters are myopic, not looking back beyond the election year in assessing the government's economic performance. Furthermore, they reveal that voters hold the primary party in a coalition government responsible for their economic well-being (Akarca and Tansel, 2006). Akarca and Tansel (2006) investigated twenty-five Turkish elections for parliament and local administration between 1950 and 2004 and found that voters take government's economic performance into account but not look back beyond one year. Furthermore, they are found to hold the major incumbent party responsible for both growth and inflation but minor incumbent parties, only for inflation (Akarca and Tansel, 2006). Çarkoglu (1997), Akarca and Tansel (2007), Akarca (2010), Akarca (2011) and Toros (2011) are other studies examined the relationship between economic performance and electoral success in Turkish politics.[3] Some of the micro level studies made in Turkey as following: Baslevent et al. (2004) performed restriction test to make pairwise comparisons of voter profiles of major political parties in Turkey. They used the Electorate Tendency Survey data conducted in 2002 and estimated the individual vote intention function based on the multinomial logit approach. They considered the socio-demographic, issue and identity variables as well as

[2]See Paldam and Lewis-Beck (2000) for the main stylized facts about VP-functions.

[3]For detailed information about economic voting literature in the context of Turkey, see the most recent study Baslevent and Kirmanoğlu (2016).

economic variables and found that there are significant differences between voter profiles resulted not only from socio-demographic controls or economic evaluations, but also from issues and identity variables (Baslevent et al., 2004). Baslevent et al. (2005) particularly focused on the electoral base of the AKP and found that young people, especially males, constitute the electoral base of the AKP. They provided evidence in support of economic voting hypothesis. Working with the individual level data, the relevance of non-economic factors such as the level of education, religiosity, ethnic identity, opinions on the issue of Turkey's membership of the EU and abolition of the death penalty have been demonstrated in Baslevent and Kirmanoglu (2009), Baslevent et al. (2009), Çarkoğlu (2012) and Toros (2014). We can generally say in the light of the studies made in Turkey, voters are sensitive to changing in the economy, that is, economic voting hypothesis is pronounced in Turkey. In addition, Turkish voters take into consideration non-economic factor as well as economic factors. In the present study, we tested two hypotheses as following:

H1: *The voters hold the ruling AKP responsible for the development in the economy. In other words, the voter rewards the AKP for good economic performance and punishes it for bad economic performance.*

H2: *The vote share of AKP in one province exhibits a positive relationship with AKP vote share in neighboring provinces.*

3.3 Data and Variables

3.3.1 Data

Our dependent variable data based on the results of the 30 March 2014 Turkish local election obtained from Supreme Board of Elections of the Republic of Turkey and independent variables data are provided from Turkish Statistical Institute (TSI). The data are province-level and include 81 provinces of Turkey. TSI applies European Union 's territory classification. According to this, regional statistics data have been published for three different regional territories by TSI and they are called NUTS. NUTS 1, 2 and 3 refer to region, sub-region and provinces,

respectively. We use NUTS 3 classification that is provinces in this study.[4]

3.3.2 Variables

We utilized the vote share of AKP by region as a dependent variable. Our analysis includes a number of independent variables in line with the previous studies discussed in economic voting in Turkey (Akarca and Tansel (2003); Akarca and Tansel (2006); Baslevent et al. (2004); Baslevent et al. (2005); Baslevent et al. (2009); Baslevent and Akarca (2008); Akarca (2009); Akarca and Baslevent (2010); Baslevent (2011); Baslevent (2013)). Various theoretical approaches emphasize certain groups of independent variables over others (Esmer, 2002).[5] Esmer (2002) collected the independent variables under the five titles: Demographic characteristics, place of residence, economic status, religious values and political values.

In the light of these classifications the vote function we estimated is made up of economic and non-economic variables. Many of the independent variables we include and discuss below are used frequently in studies of voting outcomes. The economic variables consist of unemployment rate, per capita energy consumption and trade (the sum of export and import),[6] non-economic variables comprise young and urban population,[7] gender, schooling ratio,[8] religiosity and coastal residents. In addition, we also applied the Life Satisfaction Survey, which was conducted in 2013 by TSI, to determine whether levels of satisfaction from the public services have an effect on province-level vote share of AKP. Accordingly, services such as social security, health, educational, judicial and public security are considered in the model. Moreover, we cover turnout rate and the vote share

[4]Turkey has 12 regions (Aegean, Eastern Black Sea, Eastern Marmara, Istanbul, Mediterranean, Middle Anatolia, Middle Eastern Anatolia, North Eastern Anatolia, South Eastern Anatolia, Western Anatolia, Western Black Sea, Western Marmara), 26 sub-regions and 81 provinces.

[5]As Esmer (2002) stated, Harrop and Miller (1987) distinguish three models of voting: psychological, economic and sociological.

[6]The variables are measured as percentages, KWh (kilowatt hour) and US Dollars, respectively.

[7]We consider the ages between 20-29 as young population in total (%) and proportion of province and district centers population in total (%) as urban population. For population data we employed the address based population registration system in the TSI.

[8]Schooling ratio by secondary education is considered instead of schooling ratio by primary and lower secondary education. This is because the latter variable does not differ substantially among provinces.

of AKP in 2009 local election.

To test responsibility hypothesis, unemployment rate and inflation are often used as economic variables in economic voting models. These variables are called 'the big two' by Nannestad and Paldam (1994). Sometimes, growth rate works better than the unemployment rate, and sometimes one or another variable becomes significant in addition to the big two (Nannestad and Paldam, 1994). Therefore, growth rate and trade are taken into account as well as the big two. However, due to the lack of regional data, we considered the per capita energy consumption as a proxy of economic growth rate. The energy economics literature shows that there are tremendous studies that indicate strong bivariate-causality between energy consumption and economic growth (Karanfil (2008); Lise and Van Montfort (2007); Jobert and Karanfil (2007); Lee and Chang (2007); Ang (2007)). We expect positive and negative signs for per capita energy consumption and unemployment rate, respectively. In other words, an increase in per capita energy consumption leads to an increase in votes of AKP while increasing unemployment rate induces a decrease in votes of AKP.

As for trade, it is likely to reflect the effect of global market integration on electoral consequences. We applied trade as an indicator of globalization. There are some papers investigating the opening of national economies to international competition in order to detect whether voters in open economies more or less likely hold their leaders accountable for past performance.[9] If voters believe that globalization reduces policy makers ' influence over the economy, then they may be less likely to reward or punish national politicians for economic performance (Hellwig and Samuels, 2007).

We regard the young and urban population, schooling rate, gender and religiosity in the analysis since those variables have an effect on vote share of AKP. Akarca and Baslevent (2009) and Baslevent and Akarca (2008) revealed that those who voted for AKP were mostly younger, female and less educated; Esmer (2002) reports that the level of education is found to be positively related to left-oriented parties, namely, we expect a decrease in vote share of

[9]For a detailed discussion regarding the relationship between globalization and voter behavior, see Hellwig and Samuels (2007); Hellwig (2008); Hellwig (2001).

AKP as one the level of education increases; Baslevent (2013) indicated that the urbanization rate is positively related with the electoral success of AKP. According to 2014 Turkey International Religious Freedom report, 99 percent of the population is Muslim in Turkey. Religiosity has previously been found to be a significant factor of voter preferences (Çarkoğlu and Toprak (2000); Esmer (1995); Kalaycıoğlu (1999); Akarca and Tansel (2007)). To measure the individual religiosity level, a survey question was asked on whether the respondents were a believer and how closely they followed the rules of Islam. Participants responded on a 5-point scale that means larger values correspond to higher degree of religiosity (Baslevent et al., 2004) and (Baslevent et al., 2005).

To measure the aggregate religiosity level, Akarca and Tansel (2007) considered the proportion of women in non-agricultural employment in a province since they stated, "highly conservative and devoutly religious families in Turkey tend to oppose female members of their families to work outside the home"(Akarca and Tansel, 2007). However, it is not possible to obtain that data for our study period. Instead, we used the number of participants in Koran courses and operationalized it as a share of population.[10]

There are two major ethnic origins in Turkey: Turks and Kurds. Kurds are known to be more likely to vote for HDP, which they view as representing them. The size of the Kurdish population in Turkey is controversial mainly because of the lack of census data (Sirkeci, 2000).[11] The share of ethnic Kurds in Turkey's population is estimated at anywhere between 6 and 20 percent (Sirkeci, 2000). Kurdish people may be identifiable with a region. Mutlu (1996) estimated that the majority of Kurds live in the South Eastern part of the country. As for coastal residents, the results of the election conducted in Turkey recently show that there is a distinct

[10]There are some other data that are related to religiosity published by TSI such as number of mosques and number of persons making pilgrimages (hadj). As Akarca and Tansel (2007) discovered, number of mosques variable represents the dispersion of the population rather than its religiosity or conservatism. Number of persons making hadj is not a sound indicator of religiosity as the Turkish government considers the population of provinces when allocating the people's quota given to the countries by Saudi Arabia.

[11]Sirkeci (2000) summarized the papers demonstrating the Kurdish population as percentages of total population by different sources. In 1990 's, Özsoy et al. (1992); Buckley (1994); Mutlu (1996); Bruinessen (1998) indicated that the Kurdish population are 6.2, 23, 12.6 and 20, respectively .

variation between coastal and non-coastal cities ' vote share for AKP. People living in coastal provinces have more high-income and are less religious compared to non-coastal provinces (Yilmaz et al., 2012). Because of these demographics characteristics, the differences between vote shares of AKP may exist. In order to consider these regional differences, we need to assign two dummies variable that are 1 for the provinces in the Aegean and Mediterranean coast and in the South and 0 otherwise.[12] We considered the Life Satisfaction Survey, as provinces with better public services such as health, educational, judicial and public security are expected to be more inclined to continue their support for a governing party, namely, AKP (Cinar, 2015). Province level vote share of AKP in the previous election, provided from 29 March 2009 Turkish local elections, is included to capture the political inertia in the political system. Akarca and Tansel (2006) remark that political inertia stands for ideological affiliations and party loyalties and they would expect the coefficient of that variable to be close to one since voter's education, ethnic background and socio-economic class are not likely to have changed much in a few years (Akarca and Tansel, 2006).

Finally, we insert turnout rate in the model. Baslevent (2011) found out that province level turnout rates are positively associated with the vote share of the center-left main opposition party. It appears that if more electors are convinced to go to the polls, this could provide an advantage for opposing parties while a disadvantage for AKP (Baslevent, 2011).

3.4 Econometric Methodology

In this section, we concentrate on spatial regression structures and on specification tests to detect spatial dependence (or spatial autocorrelation) in regression models. The concept of spatial dependence in regression models reflects a situation where values observed at one location or region depend on the values of neighboring observations at nearby locations (LeSage and Pace, 2009). Depending on the source of the spatial correlation, a variety of alternative spatial regression can exist. The most commonly applied spatial

[12]Diyarbakır, Mardin, Batman, Şırnak, Hakkari provinces are coded as 1 in south region dummy variable otherwise 0; Adana, Mersin, Balıkesir, İzmir, Aydın, Muğla, Antalya and Çanakkale provinces are coded as 1 in coastal region dummy variable otherwise 0.

regression models specify a spatial autoregressive (SAR) process in the dependent variable or error term (Asgharian et al., 2013).

In spatial econometrics, spatial autocorrelation is modeled by means of a functional relationship between a variable (Anselin and Bera, 1998). y, or error term, ϵ, and its associated spatial lag, respectively Wy for spatially lagged dependent variable and $W\epsilon$ for spatially lagged error term. The models are frequently referred to as the spatial lag model and spatial error model. Spatial lag dependence in a regression model is similar to inclusion of serially autoregressive term for the dependent variable y_{t-1} in a time series context (Anselin and Bera, 1998). Formally, the spatial lag model can be expressed as (Anselin and Bera, 1998):

$$\mathbf{y} = \rho\mathbf{W}\mathbf{y} + \mathbf{X}\boldsymbol{\beta} + \boldsymbol{\epsilon}$$

where $\mathbf{y}$ is a vector of observations on dependent variable, $\mathbf{W}\mathbf{y}$ is the corresponding spatially lagged dependent variable for weight matrix $\mathbf{W}$, $\mathbf{X}$ is a matrix of observations on explanatory (exogenous) variables, $\boldsymbol{\beta}$ is vector of regression coefficients, $\boldsymbol{\epsilon}$ is a vector of error terms and ρ is the spatial autoregressive parameter. When a spatially lagged dependent variable is ignored in a model specification, but present in the underlying data generating process, the resulting specification error is of the omitted variable type. This implies that OLS estimates will be biased and inconsistent (Anselin and Bera, 1998).

A second way to incorporate spatial autocorrelation in a regression model is to specify spatial process for the disturbance term, that is, spatial error model. It can be expressed as:

$$\mathbf{y} = \mathbf{X}\boldsymbol{\beta} + \boldsymbol{\epsilon}$$

a linear regression with error vector $\boldsymbol{\epsilon}$, and

$$\boldsymbol{\epsilon} = \lambda\mathbf{W}\boldsymbol{\epsilon} + \boldsymbol{\zeta}$$

where λ is the spatial autoregressive coefficient for the error lag $\mathbf{W}\boldsymbol{\epsilon}$ and $\boldsymbol{\zeta}$ is an uncorrelated and homoscedastic error term.

To find out the presence of spatial dependence, either in the form of spatial

residual correlation, or in the form of an omitted spatially lagged dependent variable, or both, we use the classic Lagrange multiplier (LM) tests proposed by Anselin (1988), as well as the robust LM-tests proposed by Anselin et al. (1996).[13] The latter tests are called robust as the existence of one type of spatial dependence does not bias the test for the other type of spatial dependence (Seldadyo et al., 2010). Both tests are based on the residuals of the OLS model and follow a chi-squared distribution with one degree of freedom (Seldadyo et al., 2010).

To detect the spatial autocorrelation that shows us the coincidence of values similarity with locational similarity, we apply Moran's I. Moran (1950)'s I test originally developed as a two-dimensional analog of the test of significance of the serial correlation coefficient univariate time series (Anselin and Bera, 1998). Cliff and Ord (1972) and Cliff and Ord (1973) formally present Moran 's I statistics as:

$$\mathrm{I} = \frac{\mathrm{N}}{\mathrm{S}_0} \frac{(\epsilon' \mathrm{W} \epsilon)}{\epsilon' \epsilon}$$

where $\boldsymbol{\epsilon} = \mathbf{y} - \mathbf{X}\hat{\boldsymbol{\beta}}$ is a vector of OLS residuals, $\hat{\boldsymbol{\beta}} = (\mathbf{X}'\mathbf{X})^{-1}\mathbf{X}'\mathbf{y}$, $\mathbf{W}$ is the spatial weight matrix, N is the number of observations, and S_o is a standardization factor equal to the sum of the spatial weights, $\sum_i \sum_j u_{ij}$. For a row-standardized weights matrix $\mathbf{W}$, S_o simplifies to N (since each rows sum equals 1) and the statistics becomes $\mathrm{I} = \frac{(\epsilon' \mathrm{W} \epsilon)}{\epsilon' \epsilon}$ (Anselin and Bera, 1998). High or low values for a random variable tend to cluster in space, or locations tend to be surrounded by neighbors with very dissimilar values. The former refers to positive spatial autocorrelation while the latter refers to negative spatial autocorrelation (Anselin and Bera, 1998). As for selecting the spatial weighting matrix, it is contradictive. Elhorst (2010) indicates that spatial weights matrices commonly used in applied research are:

1. p-order binary contiguity matrices (if $p = 1$ only first order neighbors are included, if $p = 2$ first and second order neighbors are considered, and so on)

2. inverse distance matrices (with or without a cut-off point)

3. q-nearest neighbor matrices (where q is a positive integer)

[13] See Florax et al. (2003) for formalization of LM tests.

4. block diagonal matrices where each block represents a group of spatial units that interact with each other but not with observations in other groups.

One major weakness of spatial econometric models is that the spatial weight matrix cannot be estimated but needs to be specified in advance (Elhorst, 2010). The most widely used criterion is the log-likelihood function value (Elhorst, 2010).

> "If a spatial interaction model is estimated based on S different spatial weights matrices and the log-likelihood function value of every model is estimated, one may select the spatial weights matrix exhibiting the highest log-likelihood function value" (Elhorst, 2010).[14]

3.5 Empirical Results

There are three different estimators depending on the model specification: OLS for the specification with *iid* error term and without a spatially lagged dependent variable, and maximum likelihood estimators for the spatially autoregressive error model and for the model including a spatially lagged dependent variable (Florax et al., 2003). We followed the classical approach that is called specific-to general or bottom up approach as follow (Florax et al., 2003):

1. Estimate the initial model $\mathrm{y} = \mathrm{X}\beta + \epsilon$ by means of OLS
2. Test the hypothesis of no spatial dependence due to an omitted spatial lag or due to spatially autoregressive errors, using LM_ρ and LM_λ, respectively
3. If both tests are not significant, the initial estimates from step 1 are used as the final specification. Otherwise proceed to step 4.
4. If LM_ρ test is significant but LM_λ is not, estimate the model including a spatially lagged dependent variable. Otherwise proceed to step 5.
5. Estimate the spatially autoregressive error model. If both tests are significant, estimate the robust LM tests and proceed to step 6.

[14] Elhorst (2010) discussed the various other weight matrix selection procedures.

6. If robust LM_ρ test is significant but robust LM_λ is not, estimate the model including a spatially lagged dependent variable. Otherwise proceed to step 7.

7. Estimate the spatially autoregressive error model.

Turkey is characterized by regional disparities in terms of electoral vote distribution. Figure **??** graphs the disparities among the 81 regions in our sample, based on three quantiles.

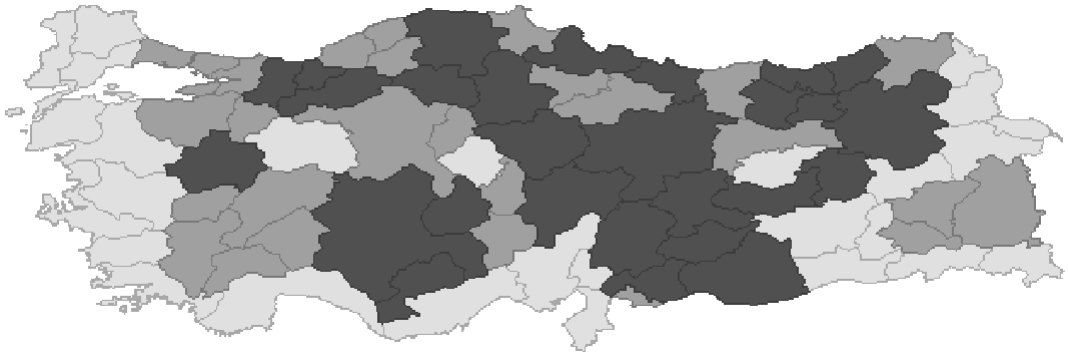

Figure 3.1: Regional Vote Share of AKP in 2014 Local Election

Notes: Darker colors represent higher AKP votes. Darkest gray represents vote share (as a percentage) of AKP between 52.1-64.3; second dark gray represents 40.5-51.9; light gray represents 14.5-40.4.

The Aegean and Mediterranean coasts and eastern part of Turkey experienced the lowest AKP votes in 2014 local election. The vote shares reveals that AKP receive a plurality of votes in most regions, but they receive significant challenge from left-wing parties in the west and Kurdish-nationalist parties in the east (Akarca and Baslevent, 2010). Appearing cluster of AKP votes directs us to benefit from spatial econometrics methods and models.

To test whether regional vote share observed within each provinces are spatially auto-correlated, we perform Moran's I. The spatial weights matrix used in these calculations is a row-standardized queen contiguity matrix. The outcome of Moran's I test statistic is 0.368 with a p value of 0.001, indicating that vote shares of AKP are strongly spatially dependent. Moran's I test statistic is a measure of spatial autocorrelation. That is, how related the values of a variable are based on the locations where they were measured. It does not give

information related to what model we need to apply in our analysis. For this, we draw on LM test procedures. The result of LM_ρ is 10.937 with a p value of 0.0009; the result of LM_λ is 0.521 with a p value 0.470. Since our results indicate that the LM lag test is highly statistically significant, to test for spatial dependence of AKP votes among different provinces, we conduct the spatial lag model. Table 3.1 reports our findings for cross-provinces differences in AKP vote share in 2014.

Table 3.1: Empirical Results of the Models

Variables	**Classic Model (OLS)**	**Spatial Lag Model (ML)**
W_AKP		0.310(0.000)***
Constant	1.046(0.803)	1.425(0.676)
Economic Variables		
Unemployment_t	-0.056(0.619)	-0.102(0.265)
$\text{Unemployment}_{t-1}$	-0.028(0.780)	0.005(0.941)
Energy Consumption	0.047(0.680)	0.044(0.634)
$\text{Energy Consumption}_{t-1}$	0.057(0.650)	0.075(0.462)
Trade_t	0.020(0.257)	0.019(0.179)
Trade_{t-1}	-0.027(0.312)	-0.026 (0.229)
Demographic Variables		
Young	0.927(0.007)***	0.955(0.000)***
Urban	0.102(0.355)	0.088(0.313)
Male	-4.991(0.000)***	-4.907(0.000)***
Female	5.003(0.000)***	4.924(0.000)***
Schooling Ratio	-0.102(0.569)	-0.289(0.055)*
Religiosity	0.144(0.022)**	0.134(0.006)***
Southeast Region	-0.055(0.659)	0.009(0.929)
Coastal Region	-0.081(0.306)	-0.058(0.359)
Life Satisfaction Survey		
Social Security	-0.072(0.779)	-0.056(0.735)
Health	0.388(0.484)	0.200(0.654)
Educational	-1.129(0.008)***	-1.149(0.000)***
Judicial	0.218(0.176)	0.234(0.068)*
Public Security	1.106(0.092)*	1.296(0.012)**
Others		
Turnout	-0.961(0.315)	0.512(0.505)
AKP vote share	0.388(0.000)***	0.350 (0.000)***
R^2	0.796	0.820
Breusch-Pagan	35.14(0.027)**	45.97(0.001)***
Log-Likelihood	50.776	54.906
LM_ρ	6.921(0.008)***	
LM_λ	0.509(0.475)	

Notes: p-values in parantheses; ***, ** and * significant at 1% , 5% and 10%, respectively. LM test statistics are based on the OLS residuals. LR statistics are based on log-likelihood values.

The fist column shows the results of the OLS estimator without a spatially lagged dependent variable or spatially autocorrelated error term. The second column shows the results of the ML estimator with a spatial lag model. In line with previous studies, the coefficient of young population, female, religiosity and AKP vote share in 2009 local election in both the OLS model and the spatial lag model are significantly different from zero and have expected signs. Higher young and

female population, urban and religiosity rate, public security services satisfaction rate and previous election vote share of AKP promote the AKP vote share in 2014 local election. Differently from the OLS model, spatial lag model shows that there is a significant effect of schooling ratio and judicial services satisfaction rate on AKP vote share in 2014. Economic variables (Unemployment rate, growth and trade) have expected signs, but not significantly different from zero. As spatial lag model is found to be more appropriate than OLS model, the coefficients of the explanatory variables in OLS model are biased (Seldadyo et al., 2010). If we compare the parameter estimates in the OLS model with their counterparts in the spatial lag model, coefficients appear overestimated or underestimated.

3.6 Conclusion

We estimate the economic voting function in the regional level for Turkey and empirical results do not confirm that the responsibility hypothesis is found in the AKP votes in 2014 local election. Accordingly, economic variables, unemployment rate, trade and growth are in an expected direction but not statistically significant. In other words, voters in the Turkey do not hold the AKP responsible for change in the economic growth, trade and unemployment rate in 2014 local election. However, non-economic variables, young population, urban rate, gender, religiosity, education and judicial services are statistically significant. It means voters who support AKP in 2014 local election are mostly young, female, religious and urban population. One interesting implication of this work is that regional vote share observed within each provinces are spatially auto-correlated, that is, vote shares of AKP are strongly spatially dependent. Consequently, a change in a single explanatory variable in a particular province not only affects the vote share of AKP in that province itself, but also in neighboring provinces. Therefore, politicians and their advisors should focus on providing improvement not only in a province itself but also in neighboring provinces.

4 ECONOMIC GLOBALIZATION AND ECONOMIC POLICY POSITONS OF PARTIES

Does economic globalization influence the economic policy positions adopted by political parties in democratic countries? In this paper, we identify multiple pathways through which market integration might induce ideological change among both left and right parties. Utilizing data from 51 countries between 1970 and 2012, we evaluate the degree to which leftist and rightist economic ideologies, respectively, are present in parties' platforms. We find that traditionally leftist positions are increasingly adopted by parties on both the right and the left in response to globalization. The results are robust to alternative modeling and estimation procedures, and to alternative measures of economic globalization. The evidence also suggests that, though there is a general tendency among parties to shift their economic platforms leftward in response to liberalization, there is significant between-country variability in the effects. An important implication of this study is that partisan ideological evolution is not driven solely by domestic forces, but by external factors, too.

4.1 Introduction

Integration into the global economy is thought to have many effects on society, both intended and not. It changes the structure of economic activity and the allocation of resources (Smith (2003), Ricardo (1891)); it helps mitigate age-old problems of scarcity, but at the same time generates socioeconomic pressures and intensifies public demands on government (Polanyi, 1957); it reorganizes the cleavages that divide a polity, and motivates political mobilization on new and different concerns (Rogowski (1987); Frieden (1991), Kayser (2007)); and,

as a consequence of all this, it influences governmental policy on a wide range of issues (e.g.Burgoon (2001); Drezner (2001); Rudra (2002); Mosley and Uno (2007)). The existing research on the political implications of globalization focuses largely on macroeconomic or policy outcomes, and the arguments are typically framed around the bottom-up pressures economic integration creates vs. the top-down constraints imposed on governments by global capital mobility (Garrett (1995); Rodrik (1998)). But there is an important intervening factor that is often overlooked: The political parties who serve as the ideological intermediaries between voters and government.

There is a growing body of work that considers how globalization conditions the effect of partisanship on economic outcomes (Garrett and Lange (1991); Milner and Keohane (1996); Oatley (1999); Milner and Judkins (2004); Bearce (2003); Kastner and Rector (2005); Potrafke (2009)). But more than just enacting policy once in office - a process that often requires *compromise* in competitive democracies - parties also create the ideological prisms through which policy is viewed by the voters, and that act as a guide for partisan wrangling in government. In short, party platforms matter. Yet there is relatively little research on how globalization has influenced parties' formal positions (Haupt, 2010). We attend to this question here.

Specifically, we consider the relationship between *economic globalization* and the *economic policy positions* of both left and right parties. Assuming parties aim to win elections, it is expected that they update party manifestos to satisfy the evolving requests and wishes of voters. Any factor that affects voter demands may influence parties' platforms, accordingly. In this context, the effect of economic globalization on partisan ideology corresponds with how voters react to the new opportunities and challenges posed by liberalization. We draw from both the *compensation* and *efficiency* hypotheses - prominent in the literature on the social welfare effects of globalization - to theorize potential directions in parties' responses to economic integration.

This study thus builds on the extensive literature concerning how and why parties' ideological positions evolve over time (Adams et al. (2004);Adams et al. (2006); Adams et al. (2009)), introducing globalization as a possible *external*

stimulant. Utilizing data from the Comparative Manifestos Project (CMP) and the KOF Globalization Index (KOF), we analyze the relationship between economic integration and the ideological positions taken by both right- and left-wing parties on economic issues. We find that, among the 51 countries included in our sample, both left and right parties adopt increasingly leftist economic platforms in response to globalization. The results of the linear mixed model also suggest that there is significant between-country variation in the effects.

The paper proceeds as follows. We first review the literature on partisan theory, with a particular focus on applications of this theory in an open-economy framework. We then introduce the data and econometric methodology used to test the according hypotheses, and present the results of our study. We conclude by discussing some of the broader implications of this research, and potential directions for future scholarship.

4.2 Literature Review and Hypotheses

Economic interests factor prominently in electoral politics (Nannestad and Paldam (1994); Lewis-Beck and Stegmaier (2013)). Parties in democratic societies devote significant proportions of their political platforms to economic policy. Politicians are cognizant of the salience of economic issues among their constituencies. Before designing and declaring their economic platforms, party leaders want to know the influence these programs will have on voter behavior. This is the foundation of economic voting theory, which has been analyzed from different perspectives. There are two major strands in the economic voting literature regarding party behavior. One is characterized by an *opportunistic* view, the other by a *partisan* view. Parties are said to be opportunistic if they choose policies with the singular goal of maximizing the probability of election (or reelection) (Nordhaus et al., 1989). Parties are said to be partisan if the "labor-oriented, working-class-based Socialist and Labor parties [left parties] typically attach far greater importance to full employment than to inflation, whereas business-oriented, upper middle-class-based Conservative parties [right parties] generally assign higher priority to price stability than to unemployment" (Hibbs, 1977). As entities competing to win office, parties

clearly care about catering to the interests of a sufficient proportion of voters. However, it is clear that the two major partisan families follow sharply different macroeconomic policies. Whereas right-wing parties are typically more concerned with inflation, leftist parties emphasize reducing unemployment.[1] (Alesina and Rosenthal, 1995)In other words, *ideology* remains a key factor in the economic positions parties adopt.

In this study, we are motivated by partisan theory. Partisan theory is often applied to analyze party behavior in a closed-economy context (Chang et al., 2013). We insert partisan theory into an open-economy framework, which allows us to consider how an additional, *external* factor - economic integration - influences parties' economic positions (Adams et al. (2004); Milner and Judkins (2004); Adams et al. (2006); Kayser (2007); Adams et al. (2009); Potrafke (2009); Haupt (2010) Ward et al. (2011); Steiner and Martin (2012); Ward et al. (2015)). Two very different ways of thinking about the impact of economic integration on ideological positions have emerged in the literature. These are commonly referred to as the *compensation* and *efficiency* hypotheses.

Kim (2007) stated "economic integration exposes national economies to the turbulences in the world economy, generating more uncertainty and volatility in the domestic economy". For this reason, governments might respond to internationalization with more interventionist and expansionary policies that "...redistribute wealth and social risk to workers and the poor and enhance competitiveness in international markets" (Garrett (1995); see also Rodrik (1998)). This idea emphasizes the *compensation* role of governments.[2] We know from partisan theory that interventionist and expansionary policies are in line with the economic policy preferences of leftist parties (Hibbs, 1977). If the left responds to globalization by doubling down on this ideological commitment but the right *does not* make this same adjustment, then we should observe even greater divergence in the economic platforms adopted by leftist and rightist parties. In other words, parties become more dissimilar (divergence) on economic policy positions. If rightist parties *do* adjust to the new pressures

[1]Left parties use expansionary macroeconomic policies, budget deficits and low interest rates to produce low unemployment; right parties use restrictive macroeconomic policies, balanced budgets, and high interest rates to produce low inflation (Oatley, 1999).

[2]See Burgoon (2001) for a detailed discussion of globalization and welfare compensation

created by globalization by adopting more interventionist and expansionary policies, then the left and right will become more similar on economic policy positions. That is, we should observe *convergence* among parties. The *compensation* logic thus carries two potential implications for partisan ideology in an era of globalization: Divergence resulting from a leftward shift by only labor-left parties, or convergence resulting from a leftward shift by rightist parties.

The *efficiency* hypothesis presents an alternative viewpoint. It hinges on an assumption from liberal economics that "compensatory policies are always inefficient, and the macroeconomic costs of pursuing them would only increase with market integration" (Milner and Keohane, 1996). In other words, the globalization of capitalism makes it increasingly difficult for states to adopt interventionist and expansionary policies - to play an active role in managing their own domestic economies. This suggests that both taxes and spending decrease with exposure to trade and capital mobility (Milner and Keohane, 1996). As Oatley (1999) writes in describing this logic, "international financial integration has eliminated the latitude leftist governments require to pursue fiscal and monetary expansions and, therefore, has eliminated distinct partisan macroeconomic policies".[3] According to Oatley (1999), this is because "financial institutions prefer low inflation and balanced budgets and rapidly shift their funds in response to macroeconomic policies that threaten to generate inflation or otherwise reduce the return on investment relative to other national market". In other words, globalization acts as a constraint on the government; it limits the range of feasible economic policies. By foreclosing on traditional leftist policies, left-leaning parties might be forced to adjust their ideological commitments, adopting economic positions resembling those maintained by the right. If this occurs, we should observe that parties' platforms become increasingly similar in response to globalization. However, unlike the *compensation* hypothesis, this *convergence* in parties' economic ideologies is a result of rightward shifts.

This brief discussion demonstrates that the pressures generated by globalization

[3]Oatley (1999) referred to this as the "capital mobility hypothesis."

cut in two directions: The workers and domestic interests who are still bound by national borders demand more state intervention and protection in response to the risks posed by economic openness (Burgoon, 2001), whereas the internationalist capitalist class that is empowered by globalization demand low inflation and balanced budgets. Party leaders, who must both cater to voters demands and commit to clearly defined ideological positions, craft their parties' positions, accordingly. The different logics imply an array of possible outcomes. That is, it is feasible that right-leaning parties adopt increasingly leftist economic policy positions, or that left-leaning parties adopt increasingly rightist economic policies. In either case, we should expect to see *convergence* in parties' economic platforms. Alternatively, we might see *divergence*, as either leftists and/or rightists double-down on their traditional ideological commitments. In the analyses that follow, we allow for each of these possible outcomes by evaluating left and right parties separately. This allows us to isolate globalization's influence on the status of right-wing economic positions among left parties, and the status of left-wing positions among parties on the right. We also expect that any general cross-national trends in the data likely mask a significant amount of within- and between- country variation. That is, the effects of globalization vary considerably, in accordance with the idiosyncratic factors that characterize each country's unique history and experience. We consider the following hypotheses:

H1:*Economic globalization has an effect on leftist (rightist) economic policy positions within rightist (leftist) parties.*

H2:*The effect of globalization on leftist (rightist) economic policy positions within rightist (leftist) parties has a significant variability between (within) countries.*

H3:*The parties converge on leftist (rightist) economic platforms.*

4.3 Data and Variables

4.3.1 Data

To test these hypotheses, we draw on data from multiple sources. One is the CMP dataset (Volkens et al. (2015); Budge et al. (2001); Klingemann et al. (2006)), which analyses parties' election manifestos in order to determine their policy positions, and is a fundamental source of information about partisan platforms (Benoit et al., 2009). Content analysis of election programs is employed to generate standardized measures of each party's policy positions (Klingemann et al., 2006). Specifically, each *quasi-sentence*[4] of every election programme is coded in to one of 56 categories, which are nested within 7 major policy areas or domains.[5] This information is used to gauge the number of policy statements in each issue category as a proportion of the total number of statements in each manifesto (Nanou, 2013), which serves as an indicator of the party's left-right orientation. In our study, a total of 2809 observations are obtained from 700 parties spanning 51 countries and a time period (not necessarily continuous) from 1920 to 2014.[6] Data on gross domestic product (GDP), measured in constant 2010 U.S. dollars, are obtained from the World Bank's World Development Indicators. Population data are obtained from the Penn World Table (PWT), constructed by Heston et al. (2012) and measured in

[4]The coding unit in a given programme is the *quasi-sentence* defined as 'an argument or phrase that is the verbal expression of one idea or meaning' (Klingemann et al., 2006)

[5]The domains are External Relations, Freedom and Democracy, Political System, Economy, Welfare and Quality of Life, Fabric of Society, and Social Groups. Since we are interested in left and right parties' position on economic policy we utilized the 'economy', 'welfare and quality of life' and 'social group' policy domains in the CMP dataset, comprising 14 of the 56 issue categories. This is consistent with how different types of issues have been classified in existing studies using the CMP data (Haupt, 2010); (Steiner and Martin, 2012); (Ward et al., 2015). The categories we included in each domain are presented in the Appendix. For identification of quasi-sentences and categories, see Klingemann et. al's example of The Liberal/SDP Alliance in Great Britain during 1983 (2006).

[6]A total of 1414 observations are obtained from 330 left parties; a total of 1395 observations are obtained from 370 right parties. The countries included in our analysis are Albania, Armenia, Australia, Austria, Azerbaijan, Belgium, Bosnia-Herzegovina, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Great Britain, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Macedonia, Malta, Mexico, Moldova, Montenegro, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, United States.

thousands of citizens.[7] Finally, we employ data from the KOF Globalization Index (Dreher et al., 2006) to capture how economically globalized each country is, and to assess the effects of this phenomenon on partisan ideology.

4.3.2 Dependent Variable

Our outcome of interest concerns parties' economic policy positions - what might be termed the "politicization of economic issues" (PE for short). We utilize an array of dependent variables that correspond with different dimensions of this concept. They are measured using data on each left and right party in each country during each election year.[8] We aggregate the party-level data to the level of party-family (i.e. left and right) within each country-election-year. For each party family, we calculate the mean scores along both the right- and left- dimensions of economic policy.[9] As there are two party families and two dimensions of economic policy, we are left with four variables: Politicization of both right and left economic issues within right parties, PE_{RR} and PE_{RL}, and politicization of both left and right economic issues within left parties, PE_{LL} and PE_{LR}. We thus evaluate each possible direction in partisan ideological change, allowing us to isolate the specific pathway/s through which either *convergence* or *divergence* occurs in response to globalization.

4.3.3 Independent Variables

We include three independent variables: Economic growth (GDP), population size (POP), and economic globalization (KOF). According to the "responsibility hypothesis", voters hold the government responsible for economic events

[7]There are several releases of PWT data. We apply for the population data to 7.1. PWT, which include 189 countries and territories, for the period 1950-2010, and uses 2005 as the reference year.

[8]The data have been sorted in ascending order by election year within each country. (West et al., 2014) suggested such a sorting is helpful when interpreting analysis results, but is not required for model fitting procedures.

[9]This is akin to (Ward et al., 2015).Example: If there are two left parties participating in the 1991 election in Albania, PE_{LL} is calculated as the sum of the leftist economic positions adopted by the left-leaning parties divided by the total number of left parties (i.e. two). Likewise, PE_{LR} is calculated as sum of the rightist economic positions adopted by the left-leaning parties, divided by the total number of left parties (i.e. two). PE_{LL} in this case would thus measure the average degree of leftist economic orientation among the two leftist parties in Albania during the 1991 election, while PE_{LR} would capture the average degree of rightist economic orientation among these same two leftist parties.

(Lewis-Beck and Stegmaier, 2000). Economic performance may influence the extent to which parties emphasize economic issues in their election campaigns (Ward et al., 2015). That is, parties may respond to changes in the salience of economic concerns by decreasing (increasing) the prominence of economic issues in their platforms. Seeing as economic performance is related not only to party positioning, but *also* to economic integration, it is important to account for this potentially confounding factor. We thus control for GDP growth, measured as the percentage change in GDP from one year to the next.[10] Alesina and Wacziarg (1998) found that there is a negative relationship between country size and trade openness. They note that

"...small countries face incentives to adopt open trade policies, precisely because they cannot benefit from access to larger markets unless they are open to trade. Thus, small countries can be expected to be more open to trade"

Therefore, consistent with Ward et al. (2015), we also control for total population (POP) to ensure that our globalization variables do not merely proxy country size. The KOF Globalization Index measures three dimension of globalization: Economic, social and political. The hypotheses considered in this paper concern only the first. We thus employ the KOF economic globalization sub-index in our analyses.[11]

[10]Unemployment and inflation, which are called the 'big two' by Nannestad and Paldam (1994), are also considered as indicators of national economic health. Data on unemployment (% of the total labor force) and inflation (annual % change in consumer prices) are obtained from the World Bank's World Development Indicators database.

[11]The economic globalization sub-component includes two main sub-indices (Dreher et al., 2006). The first, **actual flows**, consists of trade (percent of GDP, provided from World Bank), foreign direct investment stocks (percent of GDP, provided from UNCTAD), portfolio investment (percent of GDP, provided from IMF) and income payment to foreign nationals as percentage of GDP (provided from World Bank). The second, **restrictions**, consists of hidden import barriers, mean tariff rates, taxes on international trade (percent of current revenue, provided from World Bank) and capital account restrictions (Gwartney et al., 2014). The resulting 'economic globalization index' is measured on a 0 to 100 scale, with higher values indicating greater integration.

4.4 Model Specification

Our dataset is longitudinal, with observations taken at several points in time for each unit of analysis. Because of the natural hierarchy in the data (Ward et al., 2015), we estimate linear mixed models.[12]This is a parametric linear estimator for clustered, longitudinal or repeated measures data (West et al., 2014). We report the results of random coefficient models, which are often used for analysis of longitudinal data when the researcher is interested in modeling the effects of time and other time-varying covariates at Level 1, and also wishes to investigate the amount of between-subject variance in the effects of covariates across Level 2 units (West et al., 2014).[13]The general form of the model for individual response, Y_{it} on country i at t^{th} election is shown in equation as following:

$$\mathrm{Y}_{ti} = \beta_1 \mathrm{X}^1_{ti} + \beta_2 \mathrm{X}^2_{ti} + ... + \beta_p \mathrm{X}^p_{ti} + u_{1i} \mathrm{Z}^1_{ti} + ... + u_{qi} \mathrm{Z}^q_{ti} + \epsilon_{ti}$$

The value of t $(t = 1, ..., n_i)$, indexes the n_i longitudinal observations on the dependent variable for a given subject, and $i (i = 1, ..., m)$ indicates the i^{th} subject. The model involves two sets of covariates, X and Z. The first set contains p covariates, $\mathrm{X}^1, ..., \mathrm{X}^p$, associated with the fixed effects $\beta_1, ..., \beta_p$. The second set contains q covariates, $\mathrm{Z}^1, ..., \mathrm{Z}^q$ associated with the random effect $u_{1i}, ..., u_{qi}$ hat are specific to subject i (West et al., 2014). The notation can be replaced by actual variable names as following:

$$\mathrm{PE}_{ti} = \beta_0 + \beta_1 \mathrm{GDP}_{ti} + \beta_2 \mathrm{Pop}_{ti} + \beta_3 \mathrm{KOF}_{ti} + u_{0i} + u_{1i} \mathrm{GDP} + u_{2i} \mathrm{Pop} + u_{3i} \mathrm{KOF} + \epsilon_{ti}$$

The parameters β_0 through β_3 represent the fixed effects associated with the intercept and the covariates. Because the fixed intercept, β_0, corresponds to the predicted politicization of economic issues when all covariates are equal to zero, the intercept can be interpreted as the mean predicted politicization of economic

[12]A linear mixed model includes fixed and random effect parameters. Fixed effect parameters describe "the relationship of the covariates to the dependent variable for an entire population, random effects are specific to clusters of subjects within a population" (West et al., 2014)

[13]In a repeated measures or longitudinal data set, Level 1 represents the repeated measures made on the same unit of analysis. Level 2 represents the unit of analysis (West et al., 2014).

issues for countries (West et al., 2014). The terms u_{0i}, u_{1i}, u_{2i} and u_{3i} represent the random effects associated with the country-specific intercept, linear effect of GDP, Pop and KOF, respectively, for country i. The distribution of the vector of the four random effects, $\boldsymbol{u}_i$, associated with country i is assumed be multivariate normal:

$$u_i = \begin{bmatrix} u_{0i} \\ u_{1i} \\ u_{2i} \\ u_{3i} \end{bmatrix} \sim N(\mathbf{o}, \boldsymbol{D}) \tag{4.1}$$

Each of the four random effects has a mean of 0, and the variance-covariance matrix, $\mathbf{D}$, for the random effects is:

$$\mathbf{D} = \begin{bmatrix} \sigma^2_{int} & \sigma^2_{int,\text{GDP}} & \sigma^2_{int,\text{Pop}} & \sigma^2_{int,\text{KOF}} \\ \sigma^2_{int,\text{GDP}} & \sigma^2_{\text{GDP}} & \sigma^2_{\text{GDP,Pop}} & \sigma^2_{\text{GDP,KOF}} \\ \sigma^2_{int,\text{Pop}} & \sigma^2_{\text{Pop,GDP}} & \sigma^2_{\text{Pop}} & \sigma^2_{\text{Pop,KOF}} \\ \sigma^2_{int,\text{KOF}} & \sigma^2_{\text{KOF,GDP}} & \sigma^2_{\text{KOF,Pop}} & \sigma^2_{\text{KOF}} \end{bmatrix} \tag{4.2}$$

The term ϵ_{ti} in the equation represents the residual associated with the observations at election count t on country i. The distribution of the residual can be written as $\epsilon_{ti} \sim \text{N}(0, \sigma^2)$.

4.5 Empirical Results

4.5.1 Analysis of Right Parties

We applied restricted maximum likelihood estimation (REML) to obtain estimates of the covariance parameters. This is because maximum likelihood (ML) estimates of the covariance parameters are biased, whereas REML are not (West et al., 2014). Table 4.1 presents the results of two models. Both correspond with the economic policy positions adopted by rightist parties. The first models the degree to which rightist ideology is represented in the parties' platforms; the second models the degree to which leftist ideology is represented.

Fixed-effect parameter estimates and their corresponding p values are reported, along with covariance parameter estimates for country-specific linear effects.

Table 4.1: Empirical Results of Model 1 and Model 2

Models	Model 1 (DV:PE_{RR})	Model 2 (DV: PE_{RL})
Fixed Effect Parameter		
Intercept	9.414 (0.000)***	3.726 (0.060)
GDP	0.030(0.605)	0.060 (0.321)
Pop	0.000 (0.851)	0.000 (0.140)
KOF	-0.004 (0.867)	0.120 (0.000)***
Covariance Parameter		
σ^2_{int}	92.73	50.12
σ^2_{GDP}	0.000	0.004
σ^2_{Pop}	0.000	0.000
σ^2_{KOF}	0.010	0.007
ICC's[a]		
$\sigma_{\text{GDP},int}$	-0.353	-0.252
$\sigma_{\text{Pop},int}$	-0.666	0.155
$\sigma_{\text{KOF},int}$	-0.976	-0.932
Correlation Coefficient		
$\sigma_{\text{GDP,Pop}}$	0.234	-0.040
$\sigma_{\text{GDP,KOF}}$	0.351	0.277
$\sigma_{\text{Pop,KOF}}$	0.621	-0.196
σ^2	24.10	23.61

Notes: [a] (Intraclass correlation coefficients);*, ** and *** represent statistical significance at p < 0.10, p < 0.05, and p < 0.01, respectively.

Fixed Effect Parameter Estimates

The intercepts (9.414 and 3.726) represent the estimated mean values of PE_{RR} and PE_{RL} across the sampled countries, controlling for other variables. The parameter estimates for GDP [14] and Pop indicate that the estimated average slope coefficients are positive but statistically insignificant, suggesting that neither PE_{RR} nor PE_{RL} is a function of GDP and Pop. The parameter estimate for KOF in Model 1 shows that there is no significant effect of globalization on the adoption of rightist economic policies by right-leaning parties. However, Model 2 shows that there is a positive and reliable effect of globalization on the

[14]The same models are run using unemployment and inflation instead of GDP, separately. The unemployment parameter estimates are 0.0310(0.643) and −0.009(0.007) in Models 1 and 2, respectively. The inflation parameter estimates are −0.002(0.554) and 0.018(0.092) in Models 1 and 2, respectively. Both are insignificant at the $p < 0.05$ level. In other words, unemployment and inflation do not have reliable effect on the adoption of either rightist or leftist economic policy positions by rightist parties.

adoption of leftist economic policies. In other words, the amount of manifesto space rightist parties dedicate to traditionally leftist economic issues seems to increase with integration into the global economy. This is consistent with the *compensation* hypothesis, and suggests that increasing demands for protection from economic volatility resonates even with those parties that, traditionally, are averse to expansionist state intervention in the economy.

Random Effect Parameter Estimates

Random effects are used in linear mixed models to explain the between-subject variation (West et al., 2014). The random effects are not directly estimated but are summarized in terms of their estimated variances and co-variances. The values reported for σ^2_{int} (i.e. 92.73 and 50.12, respectively) tell us about the variability in the intercepts. There is substantial variation, implying that countries do differ significantly in the average degree to which both rightist (i.e.PE_{RR}) and leftist (i.e. PE_{RL}) economic policy positions are represented among right-wing parties. The random effects estimates for the slope coefficients show less variability.[15] However, the likelihood ratio test results suggest that the between-country variability in the effects of GDP, Pop and KOF on PE_{RR} and PE_{RL} is statistically significant, despite the fact that the magnitude of this variability is seemingly low. The third thing worth noting is that there is high intraclass correlation in the coefficients. Intraclass correlation coefficients (ICCs) describe the similarity (or homogeneity) of responses on the dependent variable within a unit of analysis in longitudinal datasets (West et al., 2014). Finally, that variance of the residual (i.e. σ^2) tells us how much of the within-country variance in PE_{RR} and PE_{RL} is explained by the independent

[15]To gauge the necessity for estimating random effects, West et al. (2014) recommends likelihood ratio tests, with p-values calculated using a mixture of X^2 distribution (West et al., 2014). In order to determine whether the random effects associated with the linear effect of GDP, Pop and KOF should be retained in Model 1, we estimate a nested model removing GDP from the random portion of Model 1 (Model A1). In a similar way, nested models removing Pop and KOF, one by one, from the random portion of Model 1 (Model A2 for Pop and Model A3 for KOF) are estimated, and we test the hypothesis that the random effects associated with each of these variables can be omitted from model using a REML-based likelihood ratio test. The test statistic is the -2REML log-likelihood value for Model A1 (Model A2 and Model A3) minus the value for Model 1. The p-value for this statistics is derived from a mixture of X^2 distribution, with 1 and 2 degree of freedom and equal weight 0.5 (West et al., 2014). Similar tests are conducted for Models 2, 3 and 4. The results show that all the variables should be retained in Models 1-4. The test statistic results are depicted in Appendix.

variables. Comparatively speaking, country-level independent variables explain more of the variation in PE_{RR} (i.e. the average degree of rightist economic ideology present in right-leaning parties' platforms) than they do the variation in PE_{RL} (i.e. the average degree of leftist economic ideology present in right-leaning parties' platforms). There is a nearly 4% difference in explanatory power between the two models. [16]

4.5.2 Analysis of Left Parties

Having evaluated the economic policy positions adopted by rightist parties, we now turn to our analysis of leftist parties. Table 4.2 presents the results of two models. The first, Model 3, corresponds with the degree to which leftist economic ideology is represented in leftist parties' platforms. The second, Model 4, corresponds with the degree to which rightist economic ideology is represented. As before, the fixed-effect parameter estimates and their corresponding p values are reported, along with covariance parameter estimates for country-specific linear effects.

Table 4.2: Empirical Results of Model 3 and Model 4

Models	Model 3 (DV:PE_{LL})	Model 4 (DV: PE_{LR})
Fixed Effect Parameter		
Intercept	13.89 (0.000)***	5.674 (0.000)***
GDP	0.014 (0.868)	0.011 (0.751)
Pop	0.000 (0.821)	0.000 (0.649)
KOF	0.065 (0.042)**	-0.0211 (0.151)
Covariance Parameter		
σ^2_{int}	85.37	34.92
σ^2_{GDP}	0.057	0.006
σ^2_{Pop}	0.000	0.000
σ^2_{KOF}	0.014	0.004
ICC's		
$\sigma_{\text{GDP},int}$	0.427	-0.395
$\sigma_{\text{Pop},int}$	-0.482	-0.762
$\sigma_{\text{KOF},int}$	-0.953	-0.984
Correlation Coefficient		
$\sigma_{\text{GDP,Pop}}$	-0.126	0.264
$\sigma_{\text{GDP,KOF}}$	-0.493	0.346
$\sigma_{\text{Pop,KOF}}$	0.396	0.752
σ^2	23.61	5.80

[16] Calculated as: $(24.10 - 23.16)/24.10 = 0.039$.

Fixed Effect Parameter Estimates

The intercepts (= 13.89 and 5.674) represent the estimated mean values of PE_{LL} and PE_{LR} across the sampled countries, controlling for other variables. The parameter estimates for GDP [17] and Pop indicate that neither variable has a statistically reliable effect on either PE_{LL} or PE_{LR}. In other words, leftist parties adopt neither rightist nor leftist economic policy positions in response to economic performance or population size with any consistency or regularity. Leftist parties do seem to respond to globalization, however. The parameter estimate for KOF in Model 3 shows that there is a positive and a significant association between market integration and the prominence of leftist economic ideology in left-leaning parties' platforms. Politicization of leftist economic policies among leftist parties increases with KOF. While parties on the left turn harder toward leftist economic orthodoxy, it is not clear that they tend to either increase or decrease their embrace of traditionally rightist economic issues. As Model 4 shows, there is no simultaneous or corresponding rightward shift among leftist parties in response to economic globalization.

Random Effect Parameter Estimates

Evaluation of the random effects parameters reveals patterns similar to what we found in our analysis of rightist parties. Once again, the intercepts vary considerably. The average degree to which leftist parties embrace traditional leftist and/or rightist economic positions differs significantly across countries. The likelihood ratio test results also find statistically significant between-country variability in the effects of GDP, Pop and KOF on both PE_{LL} and PE_{LR}. In other words, the evidence suggests that the effects of these variables differ depending upon the average PE_{LL} and PE_{LR} in the country. Though this slope variability is evident in the data, however, the actual extent of this variation is limited in scale. We also find high intraclass correlation in the coefficients. Finally, the variance of the residual (i.e. σ^2) tells us how much of the within-country variance in the dependent variables is explained by the

[17] The same models are run using unemployment and inflation instead of GDP growth. The results indicate that the unemployment parameter estimates are $-0.025(0.753)$ and $0.049(0.306)$ in Models 3 and 4, respectively. The inflation parameter estimates are $-0.005(0.183)$ and $0.018(0.092)$. Neither variable is statistically significant at the $p < 0.05$ level in either model. In other words, unemployment and inflation do not have reliable effects on the adoption either rightist or leftist economic policy positions by leftist parties.

model. Country-level independent variables explain much more of the variation in PE_{LL} than they do the variation in PE_{LR} - roughly 75% more, relatively speaking.[18] When combined with the findings from our analysis of rightist parties, we might conclude from the evidence that the adoption of traditionally "opposing" economic ideology is driven by other, perhaps idiosyncratic factors. Future research should focus more narrowly on this question, as it has interesting and important implications for how the traditional lines of left-right partisanship can become blurred.

Overall, the results from this study suggest that, in response to economic globalization, leftist parties tend to double down on a traditional leftist economic agenda, and that rightist parties also feel pressure to move further to the left than they otherwise would. Neither party-family seems to shift reliably to the right as a result of globalization. Thus, there appears to be some *convergence* among left and right parties around leftist economic ideology. However, it's important to note that the extent of this convergence still varies considerably across space - it's likely to be more pronounced in some countries than in others. This implies that the effects of globalization are conditioned by some omitted variables. Future research should explore potential conditioning factors.

4.5.3 Robustness Tests

We run several additional tests to verify the robustness of our initial findings. To ensure that our results are not an artifact of how we measured economic globalization, we employ a variety alternative measures. Data on trade,[19] foreign direct investment (FDI),[20] and capital flows [21], are used in place of the KOF economic globalization sub-index. Capital flows are often treated as a proxy for shorter-term economic integration, while trade and FDI represent

[18] Calculated as: (23.61-5.80)/23.61 =0.754.

[19] Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product. The data are obtained from World Development Indicators database.

[20] FDI is the sum of FDI net inflows and FDI net outflow measured as a share of gross domestic product. These data were obtained from the World Development Indicators database.

[21] Capital Flow is the sum of the capital inflows by foreign agents and capital outflows by domestic agents as a share of gross domestic product. These data come from the IMF's Balance of Payments Statistics Yearbooks.

longer-term forms of economic integration. In addition, we utilize an alternative index measure of economic globalization from the Center for the Study of Globalization and Regionalization (CSGR) (Lockwood and Redoano, 2005).

Along with alternative measures of our key independent variable, we also try different estimation and modeling procedures. We estimate both traditional OLS regression models, and linear multilevel random intercept models.[22] Finally, we estimate a first-difference model, in which parties' economic policy positions and the independent variables are operationalized as *changes* from the previous election cycle.

4.5.3.1 Alternative Measures of Economic Integration

The results from our analyses utilizing trade, FDI, and capital flows, can be found in Models 2.1 and 4.1 of Table 5.3 in the Appendix. Our main conclusions hold in the context of trade. Trade openness associates positively and significantly with the adoption of leftist economic positions by rightist parties (Model 2.1). While rightist parties tend to shift to the left in response to trade, however, there is no evidence that leftist parties reliably shift to the right (Model 4.1). The fact that FDI and capital flows *do not* not associate with leftward shifts in partisan economic ideology suggests that it is perhaps only one dimension of economic globalization driving the relationships found in our earlier analysis. That is, countries integrating primarily through capital flows - either long-term or short-term - are less prone to leftward convergence than are those that integrate primarily through trade. This is interesting, and warrants further study.

Table 5.4 in the Appendix presents results of models using the CSGR Globalization Index. Our main findings do not change. PE_{RL} increases significantly with economic globalization; PE_{LR} does not. The robustness of the results leads us to confidently conclude that globalization is leading toward convergence on a more interventionist and expansionary ideology among parties in democratic countries.[23]

[22]The results of all robustness tests are presented in the Appendix.

[23]These findings should *not* be generalized to non-democracies or poorer countries. As previous research has shown, the effects of globalization on actual social welfare policy differs significantly between the advanced and developing worlds (e.g. Rudra (2002); Wibbels

4.5.3.2 Alternative Estimation Procedures

We also apply alternative estimation techniques. The results are reported in the Appendix. First, we estimate OLS regressions on pooled data. This approach does not account for unobserved heterogeneity. Country (unit) heterogeneity means that countries differ in ways not explained by observed independent variables. When we apply the OLS estimation technique on data pooled from different countries, we necessarily assume that unobserved local factors do not exist (Wilson and Butler, 2007). Furthermore, a pooled data design violates two assumptions underlying ordinary least squares estimation: "that the disturbance terms have constant variance and that these disturbances are not correlated" (Haupt, 2010). To overcome these problems, Beck and Katz (1995) suggest an OLS model with panel-corrected standard errors. Table 5.5 in the Appendix presents the estimates of two different OLS models. The first corresponds with the degree of leftist economic ideology present in right parties' platforms (Model 2.3); the second with the degree of rightist economic ideology present in left parties' platforms (Model 4.3). We also estimate a linear multilevel model. This method separates random error into a within-country and across-country component Ward et al. (2015). Table 5.6 in the Appendix presents the results. Neither procedure produces results that refute our original findings.

4.5.3.3 Alternative Modeling Procedures

Finally, we also test the robustness of our results by operationalizing the dependent and independent variables as changes in their respective levels from the previous election period to the current election period. The interpretation of these results is a little different, as they indicate the effect that a shift in economic globalization has on the size of the shift in the economic policy positions adopted by left (right) parties. The results are presented in Table 5.7 of the Appendix. Once again, we find that *increases* in economic integration correspond with *increases* in the presence of leftist economic ideology among right-leaning parties; but that *increasing* integration does *not* drive left-leaning parties to adopt rightist economic ideology. In other words, the evidence

(2006).)

continues to show convergence around more leftist economic positions in response to globalization.

4.6 Conclusion

In this paper, we have evaluated the relationship between economic liberalism and partisan economic ideology. While existing research has analyzed the effects of globalization on a variety economic, social, and policy outcomes, relatively few studies have considered how political parties themselves respond to the socioeconomic changes wrought by market integration Haupt (2010). We believe this is an important oversight, as parties ultimately serve as the intermediaries between voters and government. They frame the issues around clearly defined ideologies, which in turn act as policy blueprints once in office (Hibbs, 1977). Inserting this understanding of "partisan theory" into an open economy framework, we drew from the logics underpinning the compensation and efficiency hypotheses to consider some possible pathways through which globalization might induce updates in parties' policy positions

We tested the theory that economic liberalization influences partisan platforms by analyzing data from 51 countries between 1970 and 2012. We isolated both left- and right- party families within countries, and evaluated the degree to which both leftist and rightist economic positions, respectively, are present in their manifestos. This approach allowed us to precisely gauge the nature and direction of ideological change. We found that both party families adopt increasingly leftist positions on economic issues in the globalization context. This builds on previous research demonstrating a strong link between market integration and social welfare policy. Rodrik (1998), for instance, found a robust empirical association between trade openness and the size of government. His explanation for this relationship hinged on the idea that integration exposes a domestic economy to greater volatility. This in turn heightens public demand for cover. As Rodrik (1998) states, "government spending appears to provide social insurance in economies subject to external shocks," and "societies seem to demand (and receive) an expanded government role as the price for accepting larger doses of external risk". Alesina and Wacziarg (1998) found similar

results, though with the added wrinkle that the link between openness and government consumption is mediated by country size. Smaller countries, they argued, are more reliant on trade. They are thus more open to a liberal trade regime, but also must accept and respond to its attending risks.

Many of the countries in our sample our smaller, middle- to upper- income democracies. They have generally embraced economic globalization. It is also apparent that they have made political adjustments in accordance with the new pressures that market integration creates. This is evident not only in the size of their social welfare programs ((Rodrik, 1998); (Alesina and Wacziarg, 1998)), but also, as our study shows, in the ideological positions adopted by their political parties. In response to economic globalization, we see greater politicization of traditionally leftist economic policies among both left and right parties. There is no evidence to suggest any reliable rightward shift in parties' economic platforms. To the extent that there is partisan convergence, it appears to be on the idea that the state has the responsibility to act as a counterweight against the risks inherent in global economic exposure. It is important to note, however, that though we find robust evidence for this general tendency in the data, we also find statistically significant between-country variability in these effects. This suggests to us that the relationship between globalization and partisan economic ideology is perhaps conditioned by some other factor or factors. This is intriguing. Under what conditions do either left or right parties respond to globalization by adopting more leftist economic positions? Though it appears to happen less frequently, under what conditions might they instead move to the right? Future research should consider these questions.

A final implication of our study is that partisan ideological evolution is not driven solely by domestic forces. There are external stimulants that can induce change, too. The prisms through which voters view government and policy can be shaped and reshaped by exposure to the outside world. Future research should explore additional external factors. For example, do left and right parties respond in particular ways to different distributions of power in the international system, or to different levels of international violence and instability? Does greater exposure to global civil society put pressure on them

to update their ideological commitments? Scholars should consider not only these questions, but also evaluate different dimensions of parties' platforms. We have focused squarely their economic positions, here. But parties also make ideological commitments on a variety of social, cultural, and political issues. Exploring them would be worthwhile.

5 CONCLUSION

This collection of essays establishes the claim that voters and parties are influenced by economic events.

In the first essay, we have investigated the voter behavior in the United Kingdom. For this, we consider the stock exchange volatility and find out voters are sensitive to the economic shocks and hold the government responsible in the United Kingdom.

In the second essay, we have estimated the economic voting function in the regional level for Turkey and reveal that a change in a single explanatory variable in a particular province not only affects the vote share of AKP in that province itself, but also in neighboring provinces.

Finally, in the third essay, we have evaluated the relationship between economic liberalism and partisan economic ideology. We have attempted to answer the question of whether economic globalization affects the economic policy position of leftist and rightist parties. Based on the econometric results, we have concluded that politicization of leftist economic policies within rightist and leftist parties are increasing as a function of economic globalization.

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APPENDIX

Classification of Issues

The measure we use for our dependent variables, PE_{RR}, PE_{RL}, PE_{LL} and PE_{LR} include 15 issue categories among 56 categories and 3 domains among 7 domains in the CMP dataset. Here is the list of the 15 categories together with the description of each category as provided by the CMP.

Right Economic Position

Domain 1: Economy

1. **per 401 Free Market Economy** It includes favorable references to: Laissez-faire economy; superiority of individual enterprise over state and control systems; private property rights; personal enterprise and initiative; need for unhampered individual enterprises.

2. **per 402 Incentives: Positive** Favorable mentions of supply side oriented economic policies (assistance to businesses rather than consumers). It includes: Financial and other incentives such as subsidies, tax breaks etc.; wage and tax policies to induce enterprise; encouragement to start enterprises.

3. **per 407 Protectionism: Negative** Support for the concept of free trade and open markets. Call for abolishing all means of market protection (in the manifesto or any other country).

4. **per 414 Economic Orthodoxy** Need for economically healthy government policy making. May include calls for: Reduction of budget deficits; retrenchment in crisis; thrift and savings in the face of economic hardship; support for traditional economic institutions such as stock market and banking system; support for strong currency.

Domain 2: Welfare and Quality of Life

1. **per 505 Welfare State Limitation** Limiting state expenditures on social services or social security. Favorable mentions of the social subsidiary principle (i.e. private care before state care).

Domain 3: Social Groups

1. **per 702 Labor Groups: Negative** Negative references to labor groups and trade unions. May focus specifically on the danger of unions 'abusing power'.

Left Economic Position

Domain 1: Economy

1. **per 403 Market Regulation** Support for policies designed to create a fair and open economic market. May include: Calls for increased consumer protection; increasing economic competition by preventing monopolies and other actions disrupting the functioning of the market; defense of small businesses against disruptive powers of big businesses; social market economy.

2. **per 404 Economic Planning** Favorable mentions of long-standing economic planning by the government. May be: Policy plans, strategies, policy patterns etc.; of a consultative or indicative nature.

3. **per 406 Protectionism: Positive** Favorable mentions of extending or maintaining the protection of internal markets (by the manifesto or other countries). Measures may include: Tariffs; quota restrictions; export subsidies.

4. **per 412 Controlled Economy** Support for direct government control of economy. May include, for instance: Control over prices; introduction of minimum wages.

5. **per 413 Nationalization** Favorable mentions of government ownership of industries, either partial or complete; calls for keeping nationalized industries in state hand or nationalizing currently private industries. May also include favorable mentions of government ownership of land.

6. **per 415 Marxist Analysis** Positive references to Marxist-Leninist ideology and specific use of Marxist-Leninist terminology by the manifesto party (typically but not necessary by communist parties).

Domain 2: Welfare and Quality of Life

1. **per 504 Welfare State Expansion** Favorable mentions of need to introduce, maintain or expand any public social service or social security scheme. This includes, for example, government funding of: Health care; child care; elder care and pensions; social housing.

Domain 3: Social Groups

1. **per 701 Labor Groups: Positive** Favorable references to all labor groups, the working class, and unemployed workers in general. Support for trade unions and calls for the good treatment of all employees, including: More jobs; good working conditions; fair wages; pension provisions etc.

Operationalization of Variables

- **Right parties' position on economic policy:**

  Per 401+per 402+ per 407+ per 414+per 505+per 702

- **Left parties' position on economic policy:**

  Per 403+ per 404+ per 406+per 412+ per 413+per 415+per 504+per 701

Likelihood Ratio Test Results for Random Effects

Hypotheses for random effect in Model 1 and 2:

Hypothesis 1: *The random effects associated with the effect of GDP can be omitted from Model 1 (Model2).*

Hypothesis 2: *The random effects associated with the effect of Pop can be omitted from Model 1 (Model 2)*

Hypothesis 3: *The random effects associated with the effect of KOF can be omitted from Model 1 (Model 2).*

Table 5.1: Likelihood Ratio Test Results for Random Effects

Model 1					
Hypothesis Label	Models Compared (Nested vs. References)	LRT (1)	LRT (As)	Test Statistic Value (Calculation)	p-Value
1	Model A1 vs. Model 1	-1029.697	-1067.397	X^2 (1:2)=75.4 (2134.7-2059.3)	0.0000
2	Model A2 vs. Model 1	-1029.697	-1073.12	X^2 (1:2)=86.94 (2146.4-2059.3)	0.0000
3	Model A3 vs. Model 1	-1029.697	-1048.509	X^2 (1:2)=37.718 (2097.0-2059.3)	0.0000
Model 2		LRT(2)	LRT(Bs)		
1	Model B1 vs. Model 2	-1024.242	-1037.098	X^2 (1:2)=25.79 (2074.1-2048.4)	0.0000
2	Model B2 vs. Model 2	-1024.242	-1036.976	X^2 (1:2)=25.52 (2073.9-2048.4)	0.0000
3	Model B3 vs. Model 2	-1024.242	-1028.157	X^2 (1:2)=7.91 (2056.3-2048.4)	0.0120

Hypotheses for random effect in Model 3 and 4:

Hypothesis 1: *The random effects associated with the effect of GDP can be omitted from Model 3 (Model 4).*

Hypothesis 2: *The random effects associated with the effect of Pop can be omitted from Model 3 (Model 4).*

Hypothesis 3: *The random effects associated with the effect of KOF can be omitted from Model 3 (Model 4).*

Table 5.2: Likelihood Ratio Test Results for Random Effects

Model 3					
Hypothesis Label	Models Compared (Nested vs. References)	LRT (3)	LRT (Cs)	Test Statistic Value (Calculation)	p-Value
1	Model C1 vs. Model 3	-1283.96	-1299.316	X^2 (1:2)=30.7 (2598.6-2567.9)	0.0000
2	Model C2 vs. Model 3	-1283.96	-1302.635	X^2 (1:2)=37.3 (2605.2-2567.9)	0.0000
3	Model C3 vs. Model 3	-1283.96	-1292.517	X^2 (1:2)=17.1 (2585.0-2567.9)	0.0001
Model 4		LRT(4)	LRT(Ds)		
1	Model D1 vs. Model 4	-950.5809	-985.3992	X^2 (1:2)=69.6 (1970.7-1901.1)	0.0000
2	Model D2 vs. Model 4	-950.5809	-987.6612	X^2 (1:2)=74.2 (1975.3-1901.1)	0.0000
3	Model D3 vs. Model 4	-950.5809	-966.767	X^2 (1:2)=32.4 (1933.5-1901.1)	0.0000

Models

Model 2.1.
$\text{PE}_{ti(\text{RL})} = \beta_0 + \beta_1\text{Trade} + \beta_2\text{FDI} + \beta_3\text{Capital} + \beta_4\text{Pop} + u_{0i} + u_{1i}\text{Trade} + u_{2i}\text{FDI} + u_{3i}\text{Capital} + u_{4i}\text{Pop} + \epsilon_{ti}$

Model 4.1.
$\text{PE}_{ti(\text{LR})} = \beta_0 + \beta_1\text{Trade} + \beta_2\text{FDI} + \beta_3\text{Capital} + \beta_4\text{Pop} + u_{0i} + u_{1i}\text{Trade} + u_{2i}\text{FDI} + u_{3i}\text{Capital} + u_{4i}\text{Pop} + \epsilon_{ti}$

Model 2.2.

$\text{PE}_{ti(\text{RL})} = \beta_0 + \beta_1\text{GDP} + \beta_2\text{Pop} + \beta_3\text{CSGR} + u_{0i} + u_{1i}\text{GDP} + u_{2i}\text{Pop} + u_{3i}\text{CSGR} + \epsilon_{ti}$

Model 4.2.

$\text{PE}_{ti(\text{LR})} = \beta_0 + \beta_1\text{GDP} + \beta_2\text{Pop} + \beta_3\text{CSGR} + u_{0i} + u_{1i}\text{GDP} + u_{2i}\text{Pop} + u_{3i}\text{CSGR} + \epsilon_{ti}$

Model 2.3.
$\text{PE}_{ti(\text{RL})} = \beta_0 + \beta_1\text{GDP} + \beta_2\text{Pop} + \beta_3\text{KOF} + \epsilon_{ti}$

Model 4.3.
$\text{PE}_{ti(\text{LR})} = \beta_0 + \beta_1\text{GDP} + \beta_2\text{Pop} + \beta_3\text{KOF} + \epsilon_{ti}$

Model 2.4.
$\text{PE}_{ti(\text{RL})} = \phi_i + \beta_0 + \beta_1\text{GDP} + \beta_2\text{Pop} + \beta_3\text{KOF} + \epsilon_{ti}$

Model 4.4.
$\text{PE}_{ti(\text{LR})} = \phi_i + \beta_0 + \beta_1\text{GDP} + \beta_2\text{Pop} + \beta_3\text{KOF} + \epsilon_{ti}$

Model 2.5.
$\Delta\text{PE}_{ti(\text{RL})} = \beta_0 + \beta_1\Delta\text{GDP} + \beta_2\Delta\text{Pop} + \beta_3\Delta\text{KOF} + u_{0i} + u_{1i}\Delta\text{GDP} + u_{2i}\Delta\text{Pop} + u_{3i} + \Delta\text{KOF} + \epsilon_{ti}$

Model 4.5.
$\Delta\text{PE}_{ti(\text{LR})} = \beta_0 + \beta_1\Delta\text{GDP} + \beta_2\Delta\text{Pop} + \beta_3\Delta\text{KOF} + u_{0i} + u_{1i}\Delta\text{GDP} + u_{2i}\Delta\text{Pop} + u_{3i} + \Delta\text{KOF} + \epsilon_{ti}$

Robustness Check Results

Table 5.3: Empirical Results of Model 2.1 and Model 4.1

Models	Model 2.1 (DV:PE_{RL})	Model 4.1 (DV: PE_{LR})
Fixed Effect Parameter		
Intercept	7.341 (0.000)***	4.323 (0.000)***
Trade	0.0540 (0.007)***	0.003 (0.650)
FDI	0.103 (0.060)	0.004 (0.817)
Capital	-0.000 (0.951)	-0.009 (0.085)
Pop	0.000 (0.061)	0.000 (0.693)
Covariance Parameter		
σ^2_{int}	7.72	3.37
σ^2_{Trade}	0.003	0.000
σ^2_{FDI}	0.012	0.000
$\sigma^2_{\text{Capital}}$	0.000	0.000
ICC's		
$\sigma_{\text{Trade},int}$	-0.628	-0.417
$\sigma_{\text{FDI},int}$	-0.211	-0.004
$\sigma_{\text{Capital},int}$	-0.015	-0.100
$\sigma_{\text{Pop},int}$	-0.132	-0.399
Correlation Coefficient		
$\sigma_{\text{Trade,FDI}}$	-0.048	-0.017
$\sigma_{\text{Trade,Capital}}$	0.033	-0.077
$\sigma_{\text{Trade,Pop}}$	0.032	0.134
$\sigma_{\text{FDI,Capital}}$	-0.002	-0.050
$\sigma_{\text{FDI,Pop}}$	0.007	-0.008
$\sigma_{\text{Capital,Pop}}$	-0.006	0.073
σ^2	23.81	7.41

Table 5.4: Empirical Results of Model 2.2 and Model 4.2

Models	Model 2.2 (DV:PE_{RL})	Model 4.2 (DV: PE_{LR})
Fixed Effect Parameter		
Intercept	1.245 (0.599)	4.248 (0.000)***
GDP	0.045 (0.639)	-0.058 (0.426)
Pop	0.000 (0.052)	0.000 (0.945)
CSGR	61.88 (0.001)***	-2.350 (0.719)
Covariance Parameter		
σ^2_{int}	14.36	12.45
σ^2_{GDP}	0.013	0.017
σ^2_{Pop}	0.012	0.000
σ^2_{CSGR}	2.787	209.11
ICC's		
$\sigma_{\text{GDP},int}$	0.812	-0.855
$\sigma_{\text{Pop},int}$	0.393	-0.130
$\sigma_{\text{CSGR},int}$	-0.965	-0.980
Correlation Coefficient		
$\sigma_{\text{GDP,Pop}}$	0.513	0.124
$\sigma_{\text{GDP,CSGR}}$	-0.876	0.813
$\sigma_{\text{CSGR,Pop}}$	-0.536	0.090
σ^2	19.78	6.30

Table 5.5: Empirical Results of Model 2.3 and Model 4.3

Models	Model 2.3 (DV:PE_{RL})	Model 4.3 (DV: PE_{LR})
Intercept	5.8415 (0.000)***	5.9991 (0.0000)***
GDP	0.0679 (0.199)	0.0167 (0.620)
Pop	0.0000 (0.032)**	0.0000 (0.433)
KOF	0.0846 (0.0000)***	-0.0270 (0.014)**

Table 5.6: Empirical Results of Model 2.4 and Model 4.4

Models (Country Level)	Model 2.4 (DV:PE_{RL})	Model 4.4 (DV: PE_{LR})
Intercept	4.241 (0.009)***	4.966 (0.0000)***
GDP	0.062 (0.281)	0.018 (0.5139)
Pop	0.000 (0.192)	0.000 (0.5981)
KOF	0.115 (0.0000)***	-0.012 (0.2533)
$\hat{\sigma}_y$	4.92	2.571
$\hat{\sigma}_{country}$	2.717	1.486

Table 5.7: Empirical Results of Model 2.5 and Model 4.5

Models	Model 2.5 (DV:$\Delta\text{PE}_{\text{RL}}$)	Model 4.5 (DV: $\Delta\text{PE}_{\text{LR}}$)
Fixed Effect Parameter		
Intercept	0.196 (0.635)	0.177 (0.401)
ΔGDP	0.049 (0.374)	0.034 (0.397)
ΔPop	0.000 (0.479)	0.000 (0.925)
ΔKOF	0.174 (0.028)**	-0.060 (0.125)
Covariance Parameter		
σ^2_{int}	0.099	0.000
σ^2_{GDP}	0.000	0.013
σ^2_{Pop}	0.000	0.000
σ^2_{KOF}	0.027	0.000
ICC's		
$\sigma_{\text{GDP},int}$	0.082	-0.093
$\sigma_{\text{Pop},int}$	0.067	0.000
$\sigma_{\text{KOF},int}$	-0.605	-0.002
Correlation Coefficient		
$\sigma_{\text{GDP,Pop}}$	-0.022	0.066
$\sigma_{\text{GDP,KOF}}$	-0.090	-0.120
$\sigma_{\text{Pop,KOF}}$	-0.146	-0.013
σ^2	30.90	9.55

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1. Sen, Sedef, and Meral Uzunoz. "Is Economic growth sensitive to oil consumption shocks in Turkey?." Energy Sources, Part B: Economics, Planning, and Policy 12.1 (2017): 70-76.
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1. Sen, S., Uzunoz, M., and Donduran, M. (2016, July). A Regional Analysis of Votes in Turkey: Evidence from 2014 Local Election. The Summer 2016 Global Business Research Symposium. Riverside, CA, USA