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TOLERANCE FOR UNITY: A DECEPTIVE CALL

BİRLİK İÇİN HOŞGÖRÜ: YANILTICI BİR ÇAĞRI

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Abstract

In the history of democratic politics, following elections many triumphant executive politicians proposed tolerance as a cure for detrimental effects of fractionalization. Moreover, tolerance level in the society and its level of fractionalization are suggested to have counter implications for a series of macro-political and macro-economic features, including level of democracy, quality of institutions and economic growth. Nevertheless, up to now far too little attention has been paid to understand the relationship between the two. This research aims to solve this puzzle and asks the question whether tolerance level of the society decreases the fractionalization of the voters and the legislative body. This research used quantitative modes of inquiry to gain insights into this relationship. A final dataset, which consists of system-level data derived from Comparative Political Data Set and aggregated individual-level data extracted from World Values Survey for 12 Western democratic countries, was used for the analyses of this research. Counter to expectations, findings revealed that out-group tolerance and fractionalization of the political party system on both votes and seats levels are statistically significantly and positively associated.

Keywords: *Votes-level Fractionalization, Seats-level Fractionalization, Out-group Tolerance, Unity, Democracy.*

Öz

Demokratik siyaset tarihinde seçimlerin akabinde muzaffer politikacıların çoğu, ayrışmanın zararlı etkilerine bir çare olarak hoşgörüyü önermiştir. Dahası, toplumdaki hoşgörü düzeyi ve bunun ayrışma düzeyinin, demokrasi seviyesi, kurumların kalitesi ve ekonomik büyüme dahil olmak üzere bir dizi makro-politik ve makro-ekonomik özellik için olumsuz etkileri olduğu ileri sürülmektedir. Fakat, şimdiye kadar ikisi arasındaki ilişkiyi anlamak için oldukça az çaba harcanmıştır. Bu araştırma, bu anlaşılmazlığı çözmeyi amaçlamakta ve toplumun hoşgörü düzeyinin, seçmenin ve yasama organının ayrışmasını azaltıp azaltmadığı sorusunu sormaktadır. Bu araştırma, bu ilişki hakkında fikir edinmek için nicel araştırma yöntemlerini kullanmıştır. Bu araştırmanın analizleri için Karşılaştırmalı Politik Veri Kümesi'nden elde edilen sistem düzeyindeki verilerden ve 12 Batılı demokratik ülke için Dünya Değerler Araştırması'ndan çıkarılan toplu bireysel düzeydeki verilerden oluşan birleştirilmiş bir veriseti kullanılmıştır. Beklentilerin aksine, bulgular grup dışı hoşgörü ve siyasi parti sisteminin hem oy hem de sandalye düzeylerinde ayrışmasının istatistiksel olarak anlamlı ve olumlu bir şekilde ilişkili olduğunu ortaya koymuştur.

Anahtar Kelimeler: *Oy Seviyesinde Ayrışma, Sandalye Seviyesinde Ayrışma, Dış Grup Hoşgörüsü, Birlik, Demokrasi.*

Introduction

On the 7th of January 2021, the United State's then-incumbent President Trump's supporters stormed the Congress building. Four people were killed and many injured in the clashes. Scenes were alarming for the American's creed. One of the established democracies of the world was suffering from its own citizens' extreme polarization. Following the election, in his inauguration speech, as the 46th president, Joe Biden underlined the importance of unity and conditioned it on tolerance. He requested from both his supporters and opponents to tolerate each other so the country can unite. He said: '*We must end this uncivil war that pits red against blue, rural versus urban, conservative versus liberal. We can do this if we open our souls instead of hardening our hearts. If we show a little tolerance and humility…*' His message was no different than those, which have been given by many other triumphant executive politicians in the history of democratic politics. Following a fiercely competitive election campaign, many triumphant executive politicians in the history of democratic politics pledged to unite the society under their rule. They did not anymore want being recognized as the leader of their own supporters only, but of the whole nation. Likewise, they did not want their government being known as the representative of their own voters only, but of the citizenry at large. Unlike before, now they tended to portray the society as one big unity and ignore all the fractions within. Typically, these politicians conditioned unity on tolerance. They called for greater tolerance to overcome problems related to polarization and fractionalization.

The United States seems to have overcome the alarming situation for now. Nevertheless, the year 2022 brought some recent developments ringing alarm bells for newer rounds of polarization and fractionalization crises in the Western world. Lasting heavy economic and social burdens of Covid-19 pandemic, low growth and high inflation rates, migration flows following the long-standing Syrian war and recent Russian invasion of the Ukraine, potential energy and food crises make many Western societies vulnerable to polarization and fractionalization. For the governments of these countries, administering people of different race and religion, people holding different political opinions and coming from different economic and social backgrounds is now becoming even a more difficult task to accomplish. In these circumstances, the ultimate aim of all the modern governments should be to ensure that each and every individual is integrated to the society and living peacefully with the others. In this regard, can the value of tolerance be functional as suggested? This research is designed to find an answer to this question. It aims to answer the question whether out-group tolerance decreases political fractionalization in the society and the legislative body.

Tolerance as a value is largely based on understanding, forbearing and accepting a person, an idea or a perspective although they are thought to be unpleasant. Historically, discussions on tolerance revolved around the religious dimension of the concept. Yet, more recently the manuscripts of John Milton, Benedict de Spinoza, John Locke, John Stuart Mill and Immanuel Kant uplifted the concept to the heart of liberal democratic theory. Systematic and empirical investigations of the concept with small-scale case studies have only started in the second half of the 21th century (Stouffer, 1955; Protho and Grigg, 1960; McClosky, 1964; Dahl, 1971; Lawrance, 1976; McClosky and Brill, 1983; Bobo and Licari, 1989; Inglehart, 2018; Duch and Gibson, 1992; Lipset, 1993; Gibson, 1996; Inglehart and Welzel, 2005). The common motivation of these studies was to test the argument suggesting that tolerance is one of a group of societal values supporting a well-functioning democratic political system. James L. Gibson, a pioneer student of tolerance studies, argues that tolerance is 'the lubricant for the machinery of democratic politics, without it democracy grinds to halt.' For Gibson: 'It takes more than constitutions, laws and political institutions to ensure vigorous political competition. In addition, democracies require a set of complimentary cultural values to function effectively…No cultural belief is more important for democratizing polities than political tolerance' (Gibson, 1996: 5,6). According to the advocates of the human development approach, which is the third approach in political culture

studies, values such as tolerance, self-expression, interpersonal trust, civic and political participation are social attitudes and values that positively affect the development and rooting of democracy. The idea suggesting that tolerance bolsters democracy was also supported by empirical findings. Inglehart and Welzel (2005) tested the link between human capital values and democracy and found that there is a statistically significant and positive relationship between values of tolerance and trust at the aggregated individual level and democracy scores at the system level (Inglehart and Welzel, 2005). Besides its direct association with democracy, tolerance was suggested to have implications for some other macro level features that can be thought as indicators of a healthy and well-functioning social, economic, and political system. For instance, the higher levels of tolerance of residents were found to be positively associated with the growth level of cities as it is believed that tolerance allows an easier integration of talented and creative people which is one of the important factors underlying growth (Florida, 2002, 2003, Ratna and Grafton, 2009). Furthermore, through the medium of level of income and freedom of press, tolerance was found to be offsetting the inducing effect of ethnic fractionalization on corruption (Buitrago, Caraballo and Roldán, 2018).

I believe studying the relationship between tolerance and fractionalization will contribute to the extant literature in at least two ways. First, although very influential politicians suggested the existence of a relationship between tolerance and fractionalization, researchers largely neglected a systematic investigation of this relationship. The existing accounts, which attempted to explore the relationship between the two concepts largely focused on fractionalization effect on tolerance but failed to focus on the effect operating from tolerance to fractionalization. Their focus on ethnic, linguistic and religious fractionalizations may have acted as a hurdle in this regard. Employing a measure based on ethnic, linguistic or religious fractionalization as function of tolerance would not be a reasonable analytical strategy to follow, as it could be going against the naturally expected direction of the relationship. Nevertheless, using a political fractionalization measure that is based on fractionalization of the voters and their representatives in the legislative body allowed reversing the direction of the causal arrow. Second, unlike in the previous works, which based their fractionalization measure on ethno-linguistic and religious items, the fractionalization measure adopted here was based on the share of voters and of their representatives as well as the number of political parties so it corresponds to the political dimension of fractionalization, which has not been fully perceived yet. Herewith, it should be noted that studying fractionalization of the representatives together with fractionalization of the people is important, as, in fact, the representatives are the ones who largely drive the political agenda of the country.

To accomplish all the tasks mentioned above, this paper would proceed in five sections. In the literature review section, a brief discussion revolving around the concepts of fractionalization and tolerance will be presented. Theoretical arguments and empirical findings from the extant literature on the two concepts and the relationship between the two will be discussed in this section. The data, construction of variables and methods will be introduced in the materials and methods section. In the results section, hypotheses will be put to a series of empirical tests and findings of these tests are presented. Contribution of the empirical findings will be discussed in a higher theoretical perspective in the final discussion and conclusion section.

1. Fractionalization and Tolerance

A relatively small body of research have studied fractionalization in the political science literature. Alesina et al. (2003) aimed to distinguish between ethnic, linguistic and religious fractionalization and their impact on economics, politics and attitudes. They found that ethnic and linguistic fractionalizations can be defined more closely and religious fractionalization is more endogenous with respect to its implications. In line, while ethnic and linguistic fractionalizations are strongly associated with GDP growth, quality of policies and quality of institutions, this is not

the case for religious fractionalization. Moreover, the magnitude of the relationship between ethnic fractionalization and growth was found to be larger than that between the linguistic fractionalization and growth. In addition, the magnitude of the association between the ethnic and linguistic fractionalizations and the growth was found to be differing remarkably across regions. Africa is the continent in which fractionalization is associated with the growth more remarkably (Alesina et al., 2003, Alesina and Ferrara, 2005, Easterly and Levine, 1997). Huntington (1968), long ago argued that the ethnic fractionalization affects quality of institutions adversely. This was suggested to be due to higher level of ethnic favouritism observed in ethnically fractionalized countries. In these countries, rather than focusing on the interests of the citizenry at large, governments focus on the interests of their supporters, which result in inefficient allocation of resources. Empirical findings supported Huntington only partly. Quality of government was found as a significant function of the ethnic and religious fractionalizations, but no association between religious fractionalization and quality of institutions was found (Alesina et al., 2003). On the other hand, although ethnic fractionalization was found to be negatively and statistically significantly associated with government quality, this is not the case after controlling for the GDP per capita (La Porta et al. 1999). Remarking to its positive implications, it was shown by another group of researchers that ethnic diversity can be beneficial for productivity, creativity, variety of product and wages (Montalvo and Reynal-Querol, 2021, Ottavino and Peri, 2005).

Unlike fractionalization, tolerance was suggested to have positive implications for a wide range of political, social, and economic outcomes. Empirical analyses showed that tolerance bolsters democratic political system (Inglehart and Welzel, 2005), increases social networks (Gani 2015) and integration (Buitrago, Caraballo and Roldán, 2018). The association between tolerance and growth has recently been discussed by a group of scholars lead by Richard Florida. Florida and his colleagues argued that the higher levels of tolerance pose low entry barriers for talented and creative people coming from diverse backgrounds which are conducive to a rise of a creative class that plays an active role in the growth of the economy (Florida, 2002, 2003). In their country-level analysis of tolerance-growth relationship, Berggen and Elinder (2012) used average annual growth in real GDP per capita as dependent variable and an index made up of two items of a battery questioning respondents' (un) willingness to have a neighbour who is homosexual and people of a different race as independent variable and a series of variables as controls in their analysis. Unlike findings of previous within-country analyses, findings of their cross-country analysis showed that while tolerance towards homosexuals associates with growth negatively, tolerance towards people of a different race associates with growth positively but only weakly in terms of statistical significance. Supportive findings were also found for the relationship between tolerance and wages in different countries (Mellander and Florida, 2007, Ottaviano and Peri, 2006).

Fractionalization and tolerance seem to have counter effects on a series of political, social and economic indicators. A number of studies focused on this. Tolerance was suggested to be offsetting detrimental effect of the ethnic fractionalization on the corruption both in direct and indirect ways. Buitrago, Caraballo and Roldán's (2018) analysis of the data collected from 86 countries using Partial Least Squares Path Modelling (PLS-PM) revealed a positive relationship between an index of tolerance towards immigrants/people of a different race that was made up of World Values Survey, European Values Survey and Social Progress Index and an index of the corruption that was made up of the Corruption Perception Index of Transparency International and the Control of Corruption Index of the World Governance Indicators. In their analysis, when tolerance was added to the equation, the detrimental effect of ethnic fractionalization on the corruption disappeared. Beside its direct effect, tolerance also operated indirectly regarding to its effect on the corruption. As the level of income and freedom of press are known to be associated to corruption, it was reported that these two are also associated with tolerance. More frankly, these

two determinants of corruption are, in fact, acting as appropriate pathways to the tolerance value flows into corruption (Buitrago, Caraballo and Roldán, 2018).

Based on this theoretical perspective one can ask the question whether tolerance and fractionalization are associated? According to the contact theory, personal contact with dissident members of the society increases tolerance towards them (Stouffer 1955, Wilson, 1991). Supporting this claim, previous studies revealed that tolerance towards out-groups grows out of being exposed to diversity of ideas (Gutmann and Thompson, 1998) and ideological diversity (Duch and Gibson, 1992). According to Lijphart (1999) political systems with higher number of parties in which decisions are taken with consensus produce kind attitudes among the members of the society. Supporting this point of view, Dunn, Orellana and Singh (2009) provided confirming evidence to the relationship between number of parties in the legislative body and out-group tolerance. Using the WVS data for citizens of countries which were recognized as free by Freedom House, they found that the higher effective number of parties (logged) the higher social tolerance and this relationship is not conditional to the level of political interest of individuals. Dividing the scale into its items, Dunn, Orellana and Singh also found that effective number of parties is positively and significantly associated with all the tolerance items except for tolerance towards immigrants. Based on this finding they argue that the electoral system in a country is positively associated with tolerance towards out-groups in that country. Weesner and Ashraf (2011) also investigated the relationship between tolerance and value fractionalization and achieved a negative correlation score (p=-0.241) between ethnic fractionalization and tolerance, and a positive one (p=0.196) between religious fractionalization and tolerance. It should be noted that both scores indicate to presence of mild associations.

As seen, the all theoretical discussions and empirical findings suggest a positive relationship between tolerance and fractionalization. Departing from all these, I ask the following question:

RQ: *Are the higher levels of out-group tolerance in the society associated with the lower levels of fractionalization of the political party system?*

In response to this question, I level the following hypothesis:

H1: *The higher levels of out-group tolerance in the society are associated with the lower levels of fractionalization of the political party system*.

2. Data, Variables and Method

2.1. Data

As understood from the analytical aim stated above, a combination of aggregated individual and system level measures is required to conduct this research. Individual and institutional level data were combined in similar studies previously (Anderson and Guillory, 1997). The data that were used for the analysis of this research were culled from Comparative Political Data Set (Armingeon et al., 2019) and World Values Survey (Inglehart et al., 2020). The researchers in the University of Zurich have collected the county level CPDS dataset. The dataset provides political and institutional data for 36 OECD countries between the years 1960 and 2018. It compiles a wide array of variables including, fractionalization on the votes and seats levels, voter turnout, government support, government type, government ideological position, vote and seat shares of ethnic, religious, and liberal parties in the system, inflation, growth, unemployment and so on. The CPDS provides the only cross-sectional time series dataset that is appropriate for the aims of this research. On the other hand, individual level data were derived from the World Values Survey (WVS), which has been conducted by a worldwide network of social scientists to explore political, social, economic, and religious values of people living over 100 countries, representing about 90% of the world population. The dataset was constructed by face-to-face interviews with

respondents stratified by random sampling. National samples were representative of the population in the age 18 and older. The project was launched in 1981 and since then 7 waves were conducted. The WVS data provides a reliable and comprehensive means for the empirical aims of this research. Data measuring out-group tolerance were collected by means of a battery-type question in the WVS (Inglehart et al., 2020). The total number of the cases in the final combined dataset is 196. The dataset shows variations in each variable for 12 countries with available data between the years 1960 and 2018. These countries are Australia, Canada, Finland, France, Germany, Italy, Netherlands, New Zealand, Norway, Sweden, Switzerland, and United States. All the data were processed using 32-bit STATA/IC, version 15.

2.2. Variables

2.2.1. Fractionalization

Dependent variables of this research were made up of index of electoral fractionalization of the party system 'rae_ele' and index of legislative fractionalization of the party system 'rae_leg', which were both proposed by Rae (1968). Rae's index allows comparing party systems from different political entities, which makes it useful for comparative politics research (Gross, 1982).

$$\text{Rae\_ele} = 1 - \sum_{i=1}^{m} v_i^2$$

where, v_i represents share of votes for the party *i* and *m* represents the total number of parties.

$$\text{Rae\_leg} = 1 - \sum_{i=1}^{m} s_i^2$$

where, s_i represents share of votes for the party *i* and *m* represents the total number of parties.

Both variables can take on any value from 0 to 1. While 0 represents the minimum level of fractionalization of the party system, 1 represents the maximum level of fractionalization of the party system and any political system can be placed between these two extremes (Armingeon et al., 2019).

2.2.2. Out-group tolerance

The key independent variable of this research is out-group tolerance. Out-group tolerance is the only variable achieved from the WVS. The English wording of the question reads: 'On this list are various groups of people. Could you please mention any that you would not like to have as neighbours?' As a battery-type of question it measures tolerance towards (a) people of a different race, (b) people of a different religion, (c) heavy drinkers, (d) immigrants and foreign workers, (e) people who have AIDS, (f) drug addicts and (g) homosexuals. These potential out-groups were chosen based on the items' face validity and availability of the data across the nations of interest. The binary variables were originally recoded in a way that '1' denotes tolerance and '0' intolerance. After recoding the response categories with the value of '0' for intolerance and with the value of '1' for tolerance, an additive mean index was created using data coming from all the 7 battery items to achieve a comprehensive out-group tolerance scores for each country-election year dyad. The Chronbach's alpha for the out-group tolerance items was 0 .89 and average inter-item correlation score was 0.66 with no single value lower than 0.62 indicating to a high internal reliability and consistency between the items constructing the out-group tolerance measure. Analysing various dimensions of tolerance was suggested since tolerance value manifests differently in different regions and this may lead to bias (Buitrago, Caraballo and

Roldán 2019). This method was used previously to measure tolerance from a broader perspective (Berggren and Nilsson, 2013, Das et al., 2008).

To isolate the pure tolerance effect on fractionalization several controls were added to the model. It was long ago suggested that individuals with higher levels of material wealth tend to have economic and physical security granted and focus on a series of higher level of needs including tolerance (Inglehart and Welzel, 2005). Extending this idea to the national level, one can argue that tolerance level is higher in countries with higher level of wealth. Three important indicators of wealth for countries, growth, inflation and unemployment were used to isolate macroeconomic effects hidden in the tolerance level of countries.

2.2.3. Growth

There are mixed findings in the literature on the relationship between fractionalization and the growth. There is evidence that while linguistic diversity is positively associated, racial diversity is negatively associated with growth in the US (Ratna and Grafton, 2009). It was also found that having time and region fixed effects controlled, value diversity is not associated with economic growth on the macro level, yet ethnic fractionalization seems to be a negative and significant determinant of growth (Weesner and Ashraf, 2011). Thus, CPDS's 'realgdpgr' variable was used for the analysis of this research. The variable represents the growth of real GDP percentage change from previous year for each country.

2.2.4. Inflation

CPDS's inflation variable, 'inflation', represents percentage change in growth of harmonised consumer price index (CPI) made up by using all the items from previous year.

2.2.5. Unemployment

The unemployment variable, 'unemp', represents percentage of unemployed to civilian labour force. The growth, inflation and unemployment variables were used as controls for the same aims of isolating a potential tolerance effect on fractionalization.

In addition to the above three macroeconomic variables, the below two macro-political variables were also controlled with the same aim of isolating the tolerance effect on fractionalization.

2.2.6. Government type

The type of the government is thought to have implications on fractionalization both in the society and the legislative body. To capture this effect **'**gov_type' variable was controlled. The categorical variable takes on 7 values but 6 are presented owing to the lack of cases in the 7th category, technocratic government, in our countries of interest. 1=Single-party majority government was chosen as the reference category. Its effect on fractionalization is measured relative to the effects of 2=minimal winning coalition, 3=surplus coalition, 4=single-party minority government, 5=multi-party minority government and 6=caretaker government.

2.2.7. Proportionality

While translating votes into seats, disproportionality is a great problem. All the scenarios except the utopic one in which the rate of votes to rate of seats is 1 for all the parties, some level of disproportionality emerges (Rae, 1967; Gallagher, 1991; Lijphart, 1994). This situation may also have implications for the relationship between fractionalization and tolerance. The proportionality of a political system and people's attitudes have been thought to be associated for a long time. There, it was suggested that political systems that are based on higher levels of consensus produce kind attitudes among the members (Lijphart, 1999). Thus, the Proportionality

variable 'prop', which takes on three values: 0=Single member, simple plurality systems (SMD), 1=Modified proportional representation, (parallel plurality PR-systems, majority-plurality/alternative vote), 2=Proportional representation (PR) was controlled.

Table 1. Variable descriptive statistics

Variable	N. Obs.	Mean	S.E.	Min	Max	Percentage
Fractionalization (on the votes level)	196	0.75	0.00	0.57	0.90	-
Fractionalization (on the seats level)	196	0.70	0.00	0.47	0.89	-
Out-group Tolerance	196	0.45	0.01	0.11	0.74	-
Growth	196	2.84	0.17	-7.28	8.16	-
Inflation	196	4.27	0.27	-1.18	17.81	-
Unemployment	196	5.13	0.23	0	15.40	-
Government Type=Single Party Majority Government	43	-	-	-	-	21.94
Government Type=Minimal Winning Coalition	55	-	-	-	-	28.06
Government Type=Surplus Coalition	51	-	-	-	-	26.02
Government Type=Single Party Minority Government	25	-	-	-	-	12.76
Government Type=Multi Party Minority Government	17	-	-	-	-	8.67
Government Type=Caretaker Government	5	-	-	-	-	2.55
Government Type=Technocratic Government	0	-	-	-	-	0
Electoral System=Single Member, Simple Plurality Systems (SMD)	27	-	-	-	-	13.78
Electoral System=Modified Proportional Representation (Modified PR)	39	-	-	-	-	19.90
Electoral System=Proportional Representation (PR)	130	-	-	-	-	66.33

Table 2. Variable distributions, by country (**table continued on next page**)

Variable	Australia	Canada	Finland	France	Germany	Italy
N. Obs.	22	17	15	14	16	15
Fractionalization (on the votes level) ($\bar{x}$)	0.66	0.85	0.83	0.80	0.72	0.79
Fractionalization (on the seats level) ($\bar{x}$)	0.59	0.83	0.81	0.67	0.69	0.76
Out-group Tolerance ($\bar{x}$)	0.39	0.34	0.30	0.54	0.72	0.70
Growth % ($\bar{x}$)	3.20	3.08	3.20	3.01	2.39	2.47
Inflation % ($\bar{x}$)	4.88	3.65	4.55	4.10	2.42	5.94
Unemployment % ($\bar{x}$)	5.11	6.15	6.03	6.55	5.08	7.58
Government Type=Single Party Majority Government (n)	8	9	0	0	1	0
Government Type=Minimal Winning Coalition (n)	10	0	2	0	15	6
Government Type=Surplus Coalition (n)	3	7	11	7	0	6
Government Type=Single Party Minority Government (n)	1	0	1	0	0	0
Government Type=Multi Party Minority Government (n)	0	0	0	3	0	2
Government Type=Caretaker Government (n)	0	1	1	0	0	1
Government Type=Technocratic Government (n)	0	0	0	0	0	0
Electoral System=Single Member, Simple Plurality Systems (SMD) (n)	0	0	0	0	0	0
Electoral System=Modified Proportional Representation (Modified PR) (n)	22	0	0	14	0	3
Electoral System=Proportional Representation (PR) (n)	0	17	15	0	16	12

Table 2. Variable distributions, by country (**continued**)

Variable	Netherlands	New Zealand	Norway	Sweden	Switzerland	US
N. Obs.	17	20	15	17	14	14
Fractionalization (on the votes level) ($\bar{x}$)	0.81	0.65	0.77	0.74	0.83	0.67
Fractionalization (on the seats level) ($\bar{x}$)	0.79	0.57	0.73	0.73	0.81	0.55
Out-group Tolerance ($\bar{x}$)	0.68	0.17	0.38	0.54	0.42	0.34
Growth % ($\bar{x}$)	2.34	3.46	3.15	3.31	1.29	2.66
Inflation % ($\bar{x}$)	3.44	5.37	4.35	4.54	2.69	4.83
Unemployment % ($\bar{x}$)	5.02	3.57	2.96	4.84	1.99	5.46
Government Type=Single Party Majority Government (n)	0	12	1	1	0	11
Government Type=Minimal Winning Coalition (n)	11	1	4	1	0	1
Government Type=Surplus Coalition (n)	3	0	0	0	14	0
Government Type=Single Party Minority Government (n)	0	3	7	11	0	2
Government Type=Multi Party Minority Government (n)	1	4	3	4	0	0
Government Type=Caretaker Government (n)	2	0	0	0	0	0
Government Type=Technocratic Government (n)	0	0	0	0	0	0
Electoral System=Single Member, Simple Plurality Systems (SMD) (n)	13	0	0	0	0	14
Electoral System=Modified Proportional Representation (Modified PR) (n)	0	0	0	0	0	0
Electoral System=Proportional Representation (PR) (n)	17	7	15	17	14	0

2.3. Method

This research used quantitative methods in order to gain insights into the relationships between the independent variables and the two dependent variables. The statistical analyses below were basically conducted to describe predictive relationships between tolerance and two types of fractionalization. In this analytical strategy, the electoral and legislative fractionalizations of the party system are dependent variables and *tolerance* is the focal predictor. The relationships between the dependent and independent variables were explored by means of a series of fixed effects analysis, which was selected over random effects model based on the results achieved from Durbin-Wu-Hausman test. Only country fixed effects were used owing to the fact that election years differ across countries.

A series of predictor variables to be influencing fractionalization were incorporated into the full model as shown in the following regression equation for country *i* and year *t*.

$$\widehat{Fractionalization\ (votes/seats\ levels\ )_i} = \widehat{b_0} + \widehat{b_1}\ Outgroup\ tolerance_i + \widehat{b_2}\ Growth_i + + \widehat{b_3}\ Inflation_i + \widehat{b_4}\ Unemployment_i + \widehat{b_5}\ Government\ type_i + \widehat{b_6}\ Electoral\ system + \varepsilon_i$$

3. Results

To explore relationships between the independent and the dependent variables, four statistical models were conducted. The results are presented in Table 3.

Table 3. Fixed Effects Models Predicting Fractionalization (on the Votes and Seats Levels)

	Fractionalization (Votes-level)		Fractionalization (Seats-level)	
	(1)	(2)	(3)	(4)
Out-group Tolerance	0.89***	0.67***	0.68***	0.37**
	(0.09)	(0.11)	(0.12)	(0.14)
Growth		-0.00		0.00
		(0.00)		(0.00)
Inflation		-0.00*		-0.00
		(0.00)		(0.00)
Unemployment		0.00		0.00
		(0.00)		(0.00)
Government Type				
Single party majority government (Ref.)				
Minimal winning coalition		0.03**		0.04***
		(0.01)		(0.01)
Surplus coalition		0.01		0.01
		(0.01)		(0.01)
Single-party minority government		0.02*		0.04**
		(0.01)		(0.01)
Multi-party minority government		0.02		0.05**
		(0.01)		(0.01)
Caretaker Government		0.02		0.03
		(0.01)		(0.02)
Electoral system				
SMD (Ref.)				
Modified PR		0.05		0.17***
		(0.03)		(0.03)
PR		-0.00		0.08**
		(0.02)		(0.02)
Intercept	0.35***	0.42***	0.39***	0.41***
	(0.04)	(0.03)	(0.05)	(0.06)

The table shows results for two sets of country fixed effects models predicting votes and seats level fractionalizations by tolerance and a series of controls. Fixed effects model is preferred over random effects model as an appropriate statistical method based on results of two Durbin-Wu Hausman tests (for both Prob>Chi^2=0.0000).

The first model employed only tolerance as the predictor of fractionalization on the votes level. It is seen that tolerance is positively associated with votes-level fractionalization (b_i=0.89, ρ <0.000, R^2 [within]= 0.33, R^2 [between]= 0.06, R^2 [overall]= 0.08). In the second model, to isolate tolerance effect on fractionalization on the votes level, growth, inflation, unemployment, government type and electoral system were added to the model. Analysis revealed that after controlling for these variables, although the power of the effect decreases, tolerance still remained to be associated positively with the votes-level fractionalization (b_i=0.67, ρ<0.001). Among controls, inflation (b_i=-0.00, ρ=0.011) and government type (b_i=0.03, ρ=0.003/ b_i=0.01, ρ=0.127/ b_i=0.02, ρ=0.038/ b_i=0.02, ρ=0.086/ b_i=0.02, ρ=0.206 for respective categories against the reference category (single party majority government) seem to have significant association with the votes-level fractionalization (R^2 [within]= 0.43, R^2 [between]= 0.05, R^2 [overall]= 0.08).

In the third model tolerance is the only predictor of fractionalization on the seats level. The related coefficient scores and significance indicators show that tolerance is associated with seats-level fractionalization positively and statistically significantly (b_i=0.68, ρ<0.000, R^2 [within]= 0.14, R^2 [between]= 0.08, R^2 [overall]= 0.10). In addition to tolerance, the same controls that were mentioned above were added to the fourth model. After controlling these variables tolerance remained to be statistically significantly associated with fractionalization on the seats level (b_i=0.37, ρ=0.010). Among controls government type (b_i=0.04, ρ<0.000/ b_i=0.01, ρ=0.138/ b_i=0.04, ρ=0.004/ b_i=0.05, ρ=0.001/ b_i=0.03, ρ=0.147 for respective categories against the reference category (single party majority government) and electoral system (b_i=0.17, ρ<0.000/ b_i=0.08, ρ=0.001 for respective categories of the reference category (SMD) seemed to be significantly associated with the votes-level fractionalization (R^2 [within]= 0.40, R^2 [between]= 0.07, R^2 [overall]= 0.10).

As a robustness check and to reveal the causal direction of the relationship, four additional models were run to predict tolerance with votes and seats level fractionalizations and the other controls. Two simple regressions with outcome variable votes and seats level fractionalizations and one predictor variable tolerance both revealed significant results. Votes level fractionalization predicted tolerance significantly (b_i=0.37, ρ<0.000, R^2 [within]= 0.33, R^2 [between]= 0.06, R^2 [overall]= 0.08). Similarly seats level fractionalization also predicted tolerance significantly (b_i=0.20, ρ<0.000, R^2 [within]= 0.14, R^2 [between]= 0.08, R^2 [overall]= 0.10). When the controls are added to the model it's seen that votes level fractionalization still predicts tolerance significantly (b_i=0.23, ρ<0.000, R^2 [within]= 0.54, R^2 [between]= 0.15, R^2 [overall]= 0.15). Similarly, seats level fractionalization also still predicts tolerance significantly (b_i=0.10, ρ<0.010, R^2 [within]= 0.47, R^2 [between]= 0.24, R^2 [overall]= 0.18).

It is seen from the both first group of analyses and robustness checks that although the relationship is a two way one as the coefficient scores reveal, the causal arrow is stronger from tolerance to fractionalization. Thus, it should be noted here that owing to the type of the analytical setting, this finding should only be read as a suggestion of the possibility of a causal relationship between the independent and dependent variables. b_i=0.67 vs. b_i=0.23 coefficient scores for the relationship between votes level fractionalization and tolerance favour the strength of the relationship operating from tolerance to votes level fractionalization. Similarly, b_i=0.37 vs. b_i=0.10 coefficient scores for the relationship between seats level fractionalization and tolerance favour the strength of the relationship operating from tolerance to seats level fractionalization.

The two equations, which were based on two extensive models predicting votes and seats level fractionalizations, emerge as in the following.

$$\widehat{Fractionalization}\,(votes\ level)_i = 0.42 + 0.67\ Outgroup\ tolerance_{i,t} - 0.00\ Inflation + 0.03\ Minimal\ Winning\ Coalition_{i,t} / 0.02\ Single\ Party\ Minority\ Government_{i,t} / (ref: Single\ Party\ Majority\ Government) + \varepsilon_i$$

$$\widehat{Fractionalization}\,(seats\ level)_i = 0.41 + 0.37\ Outgroup\ tolerance_{i,t} + 0.04\ Minimal\ Winning\ Coalition_{i,t} / 0.04\ Single\ Party\ Minority\ Government_{i,t} / 0.05\ Multi\ Party\ Minority\ Government_{i,t}\ (ref: Single\ Party\ Majority\ Government) + 0.17\ Modified\ PR_{i,t} + 0.08\ PR_{i,t}\ \ (ref: SMD) + \varepsilon_i$$

That is to say, one unit increase in out-group tolerance is associated with 0.67 units of increase in fractionalization on the votes and 0.37 units increase in fractionalization on the seats level (values for all the three variables range from 0 to 1).

Discussion and Conclusion

Only a few research attempts in the literature explored the relationship between tolerance and fractionalization. Previous studies either focused on ethnic, linguistic or religious fractionalization, or flowed the causal arrow from fractionalization to tolerance or relied on mere correlation scores. This research was designed to answer the question whether tolerance makes societies less fractionalized as suggested by many executive politicians. It measures fractionalization with Rae' (1968) two measures of fractionalization gauging partition on the votes and seats in the legislative body. The data used for the analyses were drawn from two sources; Comparative Political Dataset (CPDS) and World Values Survey (WVS). Combination of the two datasets provides a suitable final dataset made up of 196 cases involving all the variables of interest for this research. The final dataset hold data from 12 Western democratic countries including Australia, Canada, Finland, France, Germany, Italy, Netherlands, New Zealand, Norway, Sweden, Switzerland, and United States between the years 1960 and 2018. Quantitative methods were used for the analysis of the research.

Studying fractionalization as the outcome of tolerance was important owing to the fact that the latter have some negative implications for a series of important macro-political and macro-economic features, including level of democracy, quality of institutions and economic growth. Findings revealed that tolerance is positively associated with fractionalization both on votes and seats levels even after controlling for a series of controls. Moreover, the direction of the association is more strongly flowing from tolerance to fractionalization than it does so from fractionalization to tolerance. Interpretatively, by looking these findings one can argue that countries with greater level of tolerance are more likely to be fractionalized in terms of both the voters and the representatives. Findings of this research supported the previous findings that have explored the association between tolerance and fractionalization. Dunn, Orellana and Singh's (2009) measure of fractionalization, effective number of parties, was positively associated with all the tolerance items except for tolerance towards immigrants. Although different than their choice of causal direction, as unlike in theirs in this research fractionalization was predicted by tolerance, a similar association was found between the two variables. Moreover, although their fractionalization was based on ethnic and religious fractionalization, which is different than the fractionalization measures here, and their findings were based on correlation analysis, it could be argued that the finding achieved here also supported the findings of Weesner and Ashraf (2011).

This research provides answers to some questions but it raises others. The generalizability of these results is subject to certain limitations since all the countries are Western democratic ones. These are economically developed countries with high tolerance values and with no serious civil war threat. It is believed that the implication of the same model with inclusion of data from different geographies may produce different results. Thus, the first question could be: Is the equation of the relationship between tolerance and fractionalization emerges similarly in some other corners of the world. Another question could ask: Does tolerance towards different unpopular groups in a given society affects fractionalization similarly? Another one: Is it possible not only tolerance but also some other items of human capital affect fractionalization? Adding an etiological perspective to the questions, another research could ask: What are the reasons underlying the relationship between tolerance and fractionalization? As known, while fractionalization denotes number of parties in a system, polarization denotes distance among these parties. The two concepts are related but clearly tapping to different dimensions of partition. Thus, one can also ask the question: What is the relationship between tolerance and polarization? Alternatively: Does tolerance decrease polarization? Future research can be extended in a direction to give answers to some of these questions.

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