



NATIONAL RESEARCH UNIVERSITY  
HIGHER SCHOOL OF ECONOMICS

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# **FACTORS OF MOBILIZATION TO PROTEST, THEIR IMPACT AND VARIABILITY: HIERARCHICAL BAYESIAN APPROACH**

**BASIC RESEARCH PROGRAM  
WORKING PAPERS**

**SERIES: POLITICAL SCIENCE  
WP BRP 79/PS/2021**

This Working Paper is an output of a research project implemented at the National Research University Higher School of Economics (HSE). Any opinions or claims contained in this Working Paper do not necessarily reflect the views of HSE

## **FACTORS OF MOBILIZATION TO PROTEST, THEIR IMPACT AND VARIABILITY: HIERARCHICAL BAYESIAN APPROACH**

Mobilization to protest is a category of political action that has been observed quite often over the past two decades - for example, The Arab Spring, The Yellow Vests, and BLM movements can be named here. Indeed, mass protests are the voice that a crowd can use to deliver a directive message to political elites. But what can be called a driver of mobilization for protests is a debatable question. First, in different countries, the same indicator may give a different response. Secondly, the situation can change from year to year. Therefore, in this work, an attempt was made to identify what factors can be called drivers of the growth of mobilization to protests in 48 different countries of the world over an extended period of 15 years (from 2004 to 2018). The paper used methods of hierarchical Bayesian clustering, with the help of which it became possible to find out how the influence of factors of mobilization to protests differs when countries are grouped according to geographic (continental) and regime (level of democratization) characteristics. Also, the work managed to establish the fact that the most significant trigger (from the pool of those tested) to the mobilization of protests is the level of economic discontent of citizens - grievances.

JEL Classification: C46, D74.

Key words: mobilization to protest, grievances, Bayesian hierarchical clustering, political instability.

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## **Introduction: Defining mobilization to protest**

The first two decades of the 21st century have shown that the manifestation of political rights and freedoms is accepted by citizens as a tool that heralds social shifts and changes. The practice of mass political actions makes it clear that people are able to organize themselves and join social movements or interest groups to prove themselves as actors of the so-called "unconventional participation". This practice has imposed and continues to demonstrate the consequences for the life of people and communities at several levels at once: social, cultural, political, and even economic levels. But the most interesting thing is that at the research level, for which these consequences are also very important, they only have to be evaluated.

The first thing that is important to understand when studying protests and mobilization is that the participants in mass actions perform collective action, and this is a well-known, but the still controversial phenomenon of social science. However, it is important to distinguish two approaches through which political mobilization can be considered: structural and mirco-mobilization, sometimes called cultural (Grasso & Giugni, 2016). From the point of view of the structural approach, we can say that collective action is considered at the macro level and it is recognized that it is primarily the exogenous environment that has an impact on the fact that social communities or movements can arise, form, and express an opinion (most often, disagreement). The external environment, in this case, is social institutions, organizations, and practices (McCarthy, 1996) or political conjuncture (McAdam & Su, 2002). In turn, the mirco-mobilization approach is more focused on micro-analysis (perception of the individual) and aims to represent the specifics of the relationship between psychology and the political behavior of the individual, and also to show that mobilization can be triggered by a crisis of social norms, as a result of which actors are in search of new group identity (Johnston & Klandermans, 1995).

On the one hand, an approach that considers the psychology of the individual and the problem of group identity in general (mirco-mobilization) can explain the motives of crowd participants to want to mobilize at a high level. On the other hand, for macro-level research, in which the unit of analysis is the country, but not the individual, a structural approach may be more appropriate.

Nevertheless, one can certainly combine the two outlined approaches, explaining collective action (including the protest movement) using the idea of continuous relationship and the loops of connection between the individual and social level of perception (Giugni, 2003). This works fruitfully if we take into account the fact that the individual perception of individual works to have an impact on value orientations, while social institutions and practices form a social environment from individuals who share common beliefs (Gamson, 1992), and subsequently all this begins to develop social movements based on identity and, in the case of protest mobilization, on identity disagreement with the current agenda and situation.

Based on how one should understand the phenomenon of protest mobilization and the specifics of the research focus that studies it, one can focus on putting forward the full concept of the phenomenon under consideration. Thus, mobilization for protests is the attitude of the public or groups of the public, presupposing the expression of a generally open position of dissatisfaction with the established practices of state, social or economic institutions.

It is important to note that the study also attempts to assess the macrodeterminants of protest, the most valid operationalization is the level of instability of the country, provoked by a society mobilized to protests.

This strategy differs from the one that uses experimental survey results, in which respondents answer about their perceptions of protest mobilization and the reasons for participating or not participating in it, while the analysis is aimed at macrodeterminants of protest activity, which are correlates (e.g. Jenkis et al., 2008). Nevertheless, to determine the significance of the factors' coefficients that can contribute to the growth of protest mobilization, it is proposed to use the previously named strategy of using macro-variables (which are collected by quantitative and qualitative analysis of state institutions) both for the very concept of political mobilization and for the expected influencing factors.

In this regard, it is possible to postulate that in a study aimed at identifying macro-correlates of protest mobilization, one should be guided by a sample of countries, which may in its characteristics represent the general population - in this

case, protest mobilization can be spoken of as a global category, and not a category studied within the framework of a particular political regime or country. In such research conditions, it is especially interesting to select factors that should work for all countries and not be dependent on each other (expressed through each other).

Among such correlates, grievances can be distinguished. In that case, it can be operationalized as a level of social tension caused by dissatisfaction with socio-economic conditions. Second, in an era when the mass media is recognized as the “fifth echelon” of power, the degree of honesty of publications can also influence the risk of protest mobilization. Nevertheless, it is important to understand that in a country with a high economic disorder, corruption rates of mass media are not always high, and this is a good sign for research, where these correlates are used together. Thirdly, perhaps the most controversial factor that potentially has the property of influencing political mobilization is the level of state repression. It is not entirely clear how the chain of "repression-mobilization" relations develops: does forceful repression make society quieter, or does it only fuel conflict? This question has yet to be answered, but there is an assumption that the influence of this correlate will be established.

Trying to hypothesize the nature of the relationship between protest mobilization and the identified influential factors, it should be assumed that, firstly, grievances and a high level of corruption in mass media have a significant positive impact on the expansion of protest mobilization. On the other hand, it should be assumed that the indicator of state repression is interconnected with protest mobilization at a significant level. Finally, it should be assumed that the degree of influence of each of the selected factors will vary due to the type of clustering.

The paper will include data from 48 countries over 15 years (2004 to 2018) that will be processed using Bayesian regression with non-informative priors, including hierarchical clustering.

## **Previous research**

What factors are considered to be the trigger for mobilizing the population for protests? First, it should be assumed that in the modern world there is an upward

trend in the level of economic inequality and financial difficulties (after the 2008 crisis). It is interesting to consider this problem through the prism of political science while comparing the economic crisis with crises of political regimes and, subsequently, with an increased level of protest mobilization (Inglehart, 1997; Dalton, 2002). For this paper, it is important to notice how these two processes light up each other. On the other hand, it is wrong to accept as an axiom that only the economic disorder of the population affects the mobilization of protests (Marsh, 1997).

There are many research opinions on the background against which protest mobilization should be viewed, and one of the rather influential lines of thought in this regard is the relationship between the honesty of the mass media (including social media resources) and the level of protest mobilization in the country (Entman, 2004; Bennett et al., 2007). This should not come as a surprise - the indicator of the honesty of media resources may indicate how much the state needs (or not) positive propaganda and broadcasting of the news agenda, which alienates the country's citizens from the real state of affairs. In turn, if the state needs to bribe and take control of the media agenda, this may mean that there are protest moods among some groups of people that would be better hidden (Seung-Whan & James, 2006).

Finally, it is worth identifying a rather non-trivial but reasonable topic that the level of protest activity can be influenced by the severity of state repression (Armstrong & Davenport, 2004). It would be presumptuous to assert that the more repression the population faces, the less inclined it is to go over to the state of mobilizing protest (Carey, 2006). Such a scenario is possible, but it is not a law. However, it is impossible to postulate the opposite, since in this situation each country has its own history, which depends on many influential factors (Bell & Murdie, 2018). It is in this connection that the present work examines not so much the direction of communication as the significance of the contribution of state repressions to protest mobilization in the country.

Nevertheless, all three of the above possible factors of protest mobilization require not only rational justification but also scientific knowledge confirming them.

In this regard, to justify each influencing factor, some research findings that have been made earlier can be proposed taking into consideration.

It should be started with the theory of grievances. Despite the widespread opinion that this theory belongs to the group explaining protest at the individual level (Grasso & Giugni, 2016), within the framework of the theoretical assumption that the aggregate of opinions of deprived (socially and economically) citizens is a country-wide indicator of what level of grievances the state has. Moreover, the operationalization of grievances' concept in the present paper provides to take grievances as a macro-variable - the Group Grievances indicator, compiled within the framework of the Fragile States Index project.

It is not unfounded to say that changing social conditions for the worse make people experience relative deprivation, which subsequently increases the likelihood of mobilization for protests (Gurr, 1968; Jenkins et al., 2008; Dalton et al., 2010). This is not surprising, since a person who is cut off in his being from groups of citizens who can afford more has basically less or nothing to lose. In addition to the psychological stimulus described by Klandermans (1997), here one can see an institutional theory: when the costs of participation are less than the costs of silence, a person can join the protest movement (Moro, 2016).

The fact that the effect of grievances can vary from country to country is of particular interest to this study and can lead to fruitful inferences. Some researchers have repeatedly noted that for developed Western democracies, grievances cannot provoke a surge in protest activity (Barnes et al., 1979; Finkel et al., 1998), while for countries with undeveloped economies and institutions, the situation is diametrically opposite - even a slight jump in economic discontent and social deprivation can trigger a surge in protest activity (Muller & Seligson, 1987; Booth & Seligson, 2009). In this perspective, there is a fundamentally important remark for the subsequent analysis: since it is proposed to study 48 countries, among which there are both rich Western democracies and developing countries with not quite stable economies, for clarity of comparison and identification of influential observations, clustering is proposed on two grounds: by continental affiliation and by the level of democratization. This logic of clustering is due to what was said

above - different levels of elasticity of grievances according to the level of the democratic regime (in democratic countries, complaints are not influential protest triggers), as well as the fact that countries geographically located nearby tend to be somewhat similar to each other, therefore it is convenient to talk about the degree of mobilization for protests also at the continental level.

Equally interesting is the second starting point of the study: the influence of media freedom on the level of protest mobilization. It would not be unfounded to say that the presence of mass media changed the routine of the protest, since information about it began to spread faster, and the publicity affected the fact that more potential participants (dissatisfied) could learn about it and join. At the moment, some studies argue that there is a causal effect between media freedom and the level of protest activity: protest is least likely with a low level of democracy in a country and high media freedom, but not most likely when democracy reaches its peak (Whitten-Woodring & James, 2012). One way or another, one can argue that the freedom of mass media may indicate that the state is not suffocating from unfulfilled protest potential, since unbribed media can and usually express the agenda of dissenting groups of citizens, which can also be considered a form of protest, but not street movement, and protest in the form of reporting the views of dissenting media resources (Davenport, 2007). It is likely that if the media are usurped and bribed by the authorities, a form of protest by expressing an opinion in the media is impossible, and it is more likely to spill over into the form of street mobilization movement.

Finally, the most exciting but most controversial possible correlate of mobilization to protest is state repression. On the one hand, researchers have argued that the presence of democratic institutions is negatively associated with violent suppression, and internal divisions and high mobilization to protests are positively associated with protests (Davenport, 2007; Shellman, 2006; Bueno de Mesquita et al., 2005). Nevertheless, the example of the storming of the American Capitol in 2021 and the BLM in 2020, as well as the practice of dispersing yellow vests in France shows that even the presence of highly developed democratic institutions does not prevent the protest masses from mobilizing and the state to suppress them



in radical ways. This means that in the chain of the interconnection of "protest-repression" one cannot speak of a general pattern that always works - this is a bundle from the category of such systems for which a feedback loop is the most noticeable characteristic. There is the chain: protests alert the mobilization of state violence, which subsequently influences the mobilization of protesters, to which the state must again respond (or not respond) with punitive measures. Thus, the agenda of today's realities forces us to agree that political protest is a difficult concept (Gschwend & Schimmelfennig, 2007) and greatly influenced by contextual conditions. In the laws of formal logic, the inclusion of this correlate in research optics falls within the following framework: mobilization to protest is studied not as a thing in itself, but as an object influenced by the reaction of the authorities. Thus, we study the chain of interconnection "protest - repression - further development of protest", operating in a spiral of action and reaction (della Porta, 1995; Bosi & Malhaner, 2015), and it is the third iteration that becomes the key one for this work. This may justify that it is precisely the impact of repression on protest mobilization that will be studied, although it is worth repeating that the opposite effect also exists.

In conclusion, it is important to note the following. When the sample is not homogeneous, as in the case of the present study, then it is relevant to cluster the unit of analysis (country). First, as highlighted in the research, based on attitudes towards a democratic and non-democratic regime, and secondly, on the basis of belonging to one or another continent. Naturally, it is important to conclude about the general population, but it is also important to find influential observations and estimate the variation within the results of the sample. This is the strategy that the present study will follow.

### **Research design: data collection & model specifics**

Primarily, this study attempts to assess the concept of mobilizing to protest by establishing the influence of the three significant factors discussed above. For such a task with a panel of 48 countries and 15 time periods, regression analysis seems to be a relevant technique as it allows to establish the degree of influence of the independent variables on the dependent and direction of the relationship between variables. Moreover, it is suitable for analyzing a large number of cases.

The epistemological paradigm of statistical analysis is a controversial issue. There is widespread debate about whether the frequentist or Bayesian approach can produce the most reliable results (Bayarri & Berger, 2004.). This study is not intended to discuss the state of the methodological discussion about the advantages and disadvantages of each approach, because most likely different techniques are suitable for different purposes. Since there is a debate here about mobilizing to protest, it is suggested that we turn to Bayesian rather than frequentist analysis. There are several reasons for this approach.

It is widely known that in the frequentist interpretation, probability is interpreted as a statement about how often an event should occur with multiple attempts. In Bayesian interpretation, probability is interpreted as some characteristic of knowledge, in principle, as a continuation of logical judgment. It should be noted that in this state of affairs, the second approach can be considered subjectivist, while the first claims to be extensive objectivity and universality (Chaloner & Verdinelli, 1995). When it comes to things such as the chances of countries mobilizing to protest, the factor of confidence and trust in an event becomes much more important than considering probability as a limit to the relative frequency of an event after a large number of trials. In other words, in the essentially important issue of causal inference, without which it is impossible to draw conclusions about the causation of the response and factors of the model, the Bayesian model seems most reasonable and relevant (Gelman & Meng, 2004).

At the moment, the methodological paradigm has acquired justification and meaning, and further, it is necessary to explain the model itself and to analyze in more detail the variables that are included. The work used panel data compiled from 15 time periods (2004-2018), 48 countries - a total of 720 observations ( $N = 720$ ). The rationale for the time span and the number of years is such that the emphasis is on the latest (newest) available data. To be able to compose a picture claiming the objectivity of the inference, it was decided to take a decade and a half from 2004, because this year is the closest to the beginning of the growth of the movement of colored revolutions (Rose Revolution in Georgia 2003, Orange Revolution in Ukraine 2004, the Purple Revolution in Iraq 2005, the Tulip Revolution in

Kyrgyzstan 2005, etc.), so the assessment of mobilization for protests seems to be an idea that makes sense. Descriptive statistics are presented in Table 1 and Table 2.

Table 1: : Descriptive Statistics, continuous variables

Variable	Minimum	Maximum	Mean	St.dev.
Protest mobilization	-3.18	1.62	0.08	0.98
Grievances	1	10	5.37	2.21
Median Age	17	47	36.05	7.9
Corruption in Mass Media	0.006	0.9	0.35	0.32
Uneven economic development	0.7	9.4	5.06	2.17
Ln(GDP per capita)	7.1	11.3	9.9	0.86

Table 2: : Descriptive Statistics, categorical variable

Variable	% of 0	% of 1	% of 2
State Repression	0.39	0.4	0.21

A logical step is the further operationalization of the main variables used in the model. First, this is a left-hand variable (dependent) - the level of mobilization to protests, measured as the general level of political instability in the country provoked by protest movements, calculated by The World Bank Group<sup>2</sup>. Second, the variables on the right side, namely the key dependent variables. As much has been said, the first variable is grievances, conceptualized as the level of dissatisfaction with the economic situation, social deprivation, segregation, and splits between different social classes. Operationalization of the concept in the context of the research was done using the Group Grievance variable from the Fragile States Index project<sup>3</sup> (The Fund for Peace). The second variable is press freedom, which represents the level of honesty of the mass media and the absence of bribes. It is operationalized as freedom of the media<sup>4</sup>, and the data is taken from the Varieties of Democracy (V-Dem) Project. Finally, the third explanatory variable is state violence, or rather, its severity. This is operationalized on data from Human Rights Lab<sup>5</sup> (Binghamton University). In order not to provoke the problem of

<sup>2</sup> <https://info.worldbank.org/governance/wgi/>

<sup>3</sup> <https://fragilestatesindex.org/>

<sup>4</sup> <https://v-dem.net/en/data/>

<sup>5</sup> <https://www.binghamton.edu/institutes/hri/researcher-resources.html>

endogeneity and take into account the time lag as regressions do not work immediately and have a delayed effect on public opinion, it is proposed to take this predictor in time N-1. Hereby, for this variable taken in 2003-2017 against 2004-2018.

Another essential point is to discuss the need to include control variables in the model, as well as justify each of them. Classically, control variables are included in the model in order to operate not with absolute values for countries, but with relative values, according to the internal specifics of each of them, thereby improving and objectifying the assessment. This paper proposes monitoring countries for median population age, GDP per capita, and uneven economic development. Controlling the median age<sup>6</sup> is necessary because more bias towards a younger population can potentially provoke more protest activity than in countries with a more mature population (Passy & Giugni, 2000). Next up is GDP per capita<sup>7</sup>, a common control that differentiates countries based on a wealth of the population (Jenkins et al., 2008). This must be done in order not to potentiate the gap between developed and developing countries, since it is likely that in absolute terms the effects of factors are not the same. In the end, it is proposed to control uneven economic development<sup>8</sup>, since countries with large segregation of the population by economic resources can influence the results of the analysis and be presented for a sample of outliers (Hafner-Burton, 2005).

Finally, since this is a Bayesian model, it is needed to justify the prior values and distributions. There are many schools of thought that claim the relevance of informative or non-informative priors. These are reasonable remarks that the model must be given prior parameters on which it could rely. In the present study, due to the lack of interpretability and predictability of data related to protests, it is more appropriate to use non-informative prior. Probably, one should object to the popular opinion that an uninformative prior indicates a lack of knowledge of retrospective parameters. However, there are substantive objections that recognize non-

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<sup>6</sup> <https://www.cia.gov/the-world-factbook/>

<sup>7</sup> <https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database-2018>

<sup>8</sup> <https://fundforpeace.org/>

informative priors as a form of knowledge (Jeffreys, 1961; Bernardo, 1979; Kass & Wasserman, 1996). The main difficulty with non-informative prior is the resulting incorrect posterior distribution, which is obtained after running the model. In the present study, this problem was overcome, and convergence was reached for each model as well as diagnostics (Gelman<sup>9</sup> and Geweke<sup>10</sup>) confirmed such results. This was achieved by choosing the normal distribution  $N(0,1)$  for the response variable, and in this case, there is no violation of the assumption of normality, because the variable of political mobilization has a normal distribution. Further, when switching to hierarchical modeling (clustering), the clustering parameter obeys the law of uniform distribution with parameters  $U(0, 10)$ .

Thereby, in this study, Bayesian regression models are presented. Given non-informative prior, a normal distribution for the dependent variable, three key predictors, and three control variables are the common features for these models.

### **Main results: factors influencing the mobilization to protest**

First, it is proposed to demonstrate the results of the first basic model, which is designed to assess the significance of factors affecting the mobilization of protests (Table 3). According to the obtained estimates of the posterior distribution, grievances are indeed a considerable correlate for protest mobilization. The coefficient for this variable is significant and equal to -0.9, which means that with an increase in the grievances parameter by one unit of the measurement scale, the probability of social stability and lack of mobilization decreases by 0.9 points, *ceteris paribus*. It can be concluded that grievances as a macroparameter is indeed capable of potentiating protest mobilization in the countries of the world - thus, the hypothesis of a significant negative relation of protest mobilization with grievances is confirmed.

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<sup>9</sup> The general approach to monitoring convergence of MCMC output in which  $m > 1$  parallel chains are updated with initial values that are overdispersed relative to each target distribution, which must be normally distributed. Convergence is diagnosed when the chains have 'forgotten' their initial values, and the output from all chains is indistinguishable.

<sup>10</sup> The Geweke diagnostic takes two nonoverlapping parts (usually the first 0.1 and last 0.5 proportions) of the Markov chain and compares the means of both parts, using a difference of means test to see if the two parts of the chain are from the same distribution (null hypothesis).

Table 3: Correlates of protest mobilization, OLS  
Model 1

	Model 1
Intercept	-.1 (-1.97, 1.92)
State Repression	<b>.06</b> (.006, .1)
Corruption in Mass Media	-.28 (-.85, 0.2)
Grievances	<b>-.09</b> (-.13, -.05)
Uneven economic development	<b>.06</b> (.02, .09)
Ln(GDP per capita)	<b>.35</b> (.2, .5)
Median Age	-.07 (-.18, 0.01)

OLS model. Statistics represent relevant point estimates and 95% confidence/HPD intervals. Distributions with 50% intervals that do not overlap zero highlighted in bold.

Notwithstanding, another important correlate that was expected to be significant in the first baseline model turned out to be insignificant. To be more precise, it should be said that freedom of mass media does not contribute to protest mobilization (according to the tested data and model specification). It can be assumed that this parameter is too sensitive to the peculiarities of country characteristics, therefore the overall coefficient does not give significance - and this conclusion is really important in the framework of the work. Presumably, for this correlate, the significance can be reached only when the countries are segregated into different clusters: as already mentioned earlier, geographic and regime (level of democratization).

Finally, it must be said about the variable of state repression. The estimates indicate that this correlate is significant. This can be interpreted as if the state repression changes by one unit of the measurement scale in period N-1, the probability of protest mobilization in period N will increase by 0.6 points. This is not as strong an effect as it is for grievances, but it is tangible. Moreover, the hypothesis about the significance of this correlate can be considered confirmed. This gives promising results and may indicate that, in general, for the sample of countries, the policy of violent suppression of the state can potentiate the mobilization of society and protest movements. Even though that there is a perfectly reasonable statement that the relationship between protest mobilization and force suppression can be described by a feedback loop, which must be evaluated using numerical modeling methods (Akhremenko et al, 2017), this study does not claim on the

regular and accepted character between the relationship of repression and protest. On the contrary, the conclusions can be extrapolated only on the assumption that a specific type of connection is being assessed: how violence by the state (as a policy) can influence further public protests.

Further, it is proposed to evaluate the results of models with clustering. The second model (Table 4) assumes a hierarchical clustering of countries by continent, where each country belongs to one of the groups from a common geographic family.

Table 4: Correlates of protest mobilization, OLS

	Model 2
Intercept	<b>-2.5</b> (-3.8, -1.2)
State Repression	<b>.07</b> (.019, .12)
Corruption in Mass Media	<b>-.4</b> (-.85, -.08)
Grievances	<b>-.14</b> (-.18, -.11)
Uneven economic development	.016 (-.01, .04)
Ln(GDP per capita)	<b>.29</b> (.18, .4)
Median Age	<b>.036</b> (.017, .05)

OLS model. Statistics represent relevant point estimates and 95% confidence/HPD intervals. Distributions with 50% intervals that do not overlap zero highlighted in bold.

This is done to demonstrate the effects, taking into account the specifics of geographically closely located countries. Presumably, such a transformation can reveal the different values and significance of the coefficients for the factors of protest mobilization compared to the first model.

The estimates do indicate that this model produces different coefficients. So, for example, in the first model, the constant was insignificant and was -0.1, whereas now its value is -2.5. This is a very serious change, which suggests that when the model is clustered across continents, the average probability of mobilization to protests is -2.5, and this is a high value of mobilization to protests. Moreover, the grievances were -0.14 (versus -0.09 in the first model), which also shows an increase in the effects when the model with clustering is re-evaluated. Perhaps one of the most important observations about this model is the significance of the correlate of mass media freedom. With an increase in the corruption of mass media by one unit of the measurement scale, the probability of social stability and lack of mobilization

decreases by 0.4 points. As suggested earlier, geographic clustering makes the model more receptive to the importance of media freedom.

Moreover, it can be noticed that according to clustering by continents the widest mass mobilization effect (and uncertainty) can be observed in Iraq, Israel, and Spain, the lowest - in Zambia, Kazakhstan, and Honduras (Figure 1).

The third model (Table 5) is also made using hierarchical clustering but based on the level of democratization. As discussed concerning the theory, mobilization to protest is context-sensitive, and the most popular contextual condition that can affect the picture is the level of democratization. For clustering, it was necessary to take the Vanhanen index<sup>11</sup> converted to a factor scale. This index appears to be the most appropriate for comparing countries that are undergoing a "triple transition" and are not consolidated democracies with countries that are democracies. For clustering convenience, the index was distributed over six thresholds: very low (<3), low (4 - 9), above-low (10 - 20), above-average (21 - 34), high (35 - 40), very high (> 40). The index values were taken as the average for all years (2004-2018), and then assigned to the country as a factor. The estimates obtained do not differ significantly from the geographic clustering model, thus leading to the curious conclusion that the countries of the same continent, as a rule, have a similar or the same level of democratization.

Table 5: Correlates of protest mobilization, OLS

	Model 3
Intercept	<b>-2.4</b> (-3.8, -1.14)
State Repression	<b>.07</b> (.02, .13)
Corruption in Mass Media	<b>-.36</b> (-.74, -.05)
Grievances	<b>-0.14</b> (-.18,-.11)
Uneven economic development	<b>0.02</b> (-.01, .05)
Ln(GDP per capita)	<b>0.3</b> (.19, .4)
Median Age	<b>.04</b> (.02, 0.06)

OLS model. Statistics represent relevant point estimates and 95% confidence/HPD intervals. Distributions with 50% intervals that do not overlap zero highlighted in bold.

<sup>11</sup> <https://ourworldindata.org/grapher/index-of-democracy-participation-and-competition>



For clustering by the level of democracy, it is reasonable to say that the lowest mass mobilization effect (and uncertainty) can be observed in Zambia, Kazakhstan, and Honduras (like for continents), but on the level of the widest effect, Russia emerges along with Iraq and Israel (Figure 2).

Since the most significant correlate in the model turned out to be grievances, it seems reasonable to cluster the model according to the effects of grievances (Table 6). It would be more interesting to evaluate the small and large values of this correlate separately, therefore, the model specification proposes to split them into two predictors - Low Grievances (< 3) and High Grievances (> 6). The results of the model show that Low Grievances are insignificant, and High Grievances are significant (Table 6). This suggests that protest mobilization is highly elastic in terms of the high level of radicalization of economic discontent. This conclusion is the best demonstration that the theory of grievances in the framework of mobilization for protests fits into the concept of participation costs.

Table 6: Correlates of protest mobilization, OLS

	Model 4
Intercept	<b>-2.9</b> (-4.1, -1.7)
State Repression	<b>.06</b> (.006, .1)
Corruption in Mass Media	<b>-.9</b> (-1.3, -0.5)
Low Grievances	-.01 (-.18, .17)
High Grievances	<b>-0.3</b> (-.55, -0.07)
Uneven economic development	<b>0.05</b> (.016, .08)
Ln(GDP per capita)	<b>0.2</b> (0.1, 0.3)
Median Age	<b>.03</b> (.003, 0.05)

OLS model. Statistics represent relevant point estimates and 95% confidence/HPD intervals. Distributions with 50% intervals that do not overlap zero highlighted in bold.

It can be noticed that the widest mass mobilization effect (and uncertainty) can be observed in Iraq, Israel, and Turkey, the lowest - in Zambia, Kazakhstan, and Oman (Figure 3). We can also notice that mean values for the high grievances locate more left than low and middle (they are actually the same). Almost for all countries high grievances have a greater level of uncertainty and spread of values for political mobilization.

## Conclusion

This study can be called an exploratory attempt to determine which factors can be taken into account in terms of their degree of influence on protest mobilization in the world. In other words, an attempt was made to answer the question of what influences the mobilization for protests. According to theoretical assumptions, three factors were selected that are supposed to make a large contribution to the formation of mobilization for protests: grievances, freedom of the press, and state repression. Taking into account the large degree of debate around protest topics, the high unpredictability and unevenness of the process of mobilizing to protests, it was decided to use a Bayesian approach, within which one can interpret not the degree of the fierceness of the protest mobilization due to the three selected factors, but the degree of confidence that it really is. maybe so. Four models were tested, three of which were performed using hierarchical clustering. In the process of testing hypotheses, it was confirmed that grievances have a significant negative relationship with protest mobilization (the higher the level of grievances, the less calm the society is about mobilization). This conclusion is true for four models and, as a result, its validity can be considered high. The same is true for state repression: the more repressive the state apparatus is, the less calm the society is to mobilize. The conclusion is also valid at the confidence level of the four models. Nevertheless, the indicator of corruption of mass media in the first model, not specified by clustering, did not show significant results. Whereas in all models with clustering, the covariate is significant. This means that the indicator of press corruption is sensitive to within-sample variation. Moreover, the hypothesis was confirmed that the influence of covariates can change by means of different clustering methods: thus, this is again characteristic of both grievances (the first and other models) and corruption in mass media (the first, second, and fourth models).

In general, the main ideas of the study were realized with the help of tested Bayesian models, the interpretation of which confirms the previously identified theoretical premises and opens up new, far-reaching conclusions, which should be worked on in a more focused way - for example, more precisely and in detail to focus on the interaction of repression and protest mobilization.

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# Figures

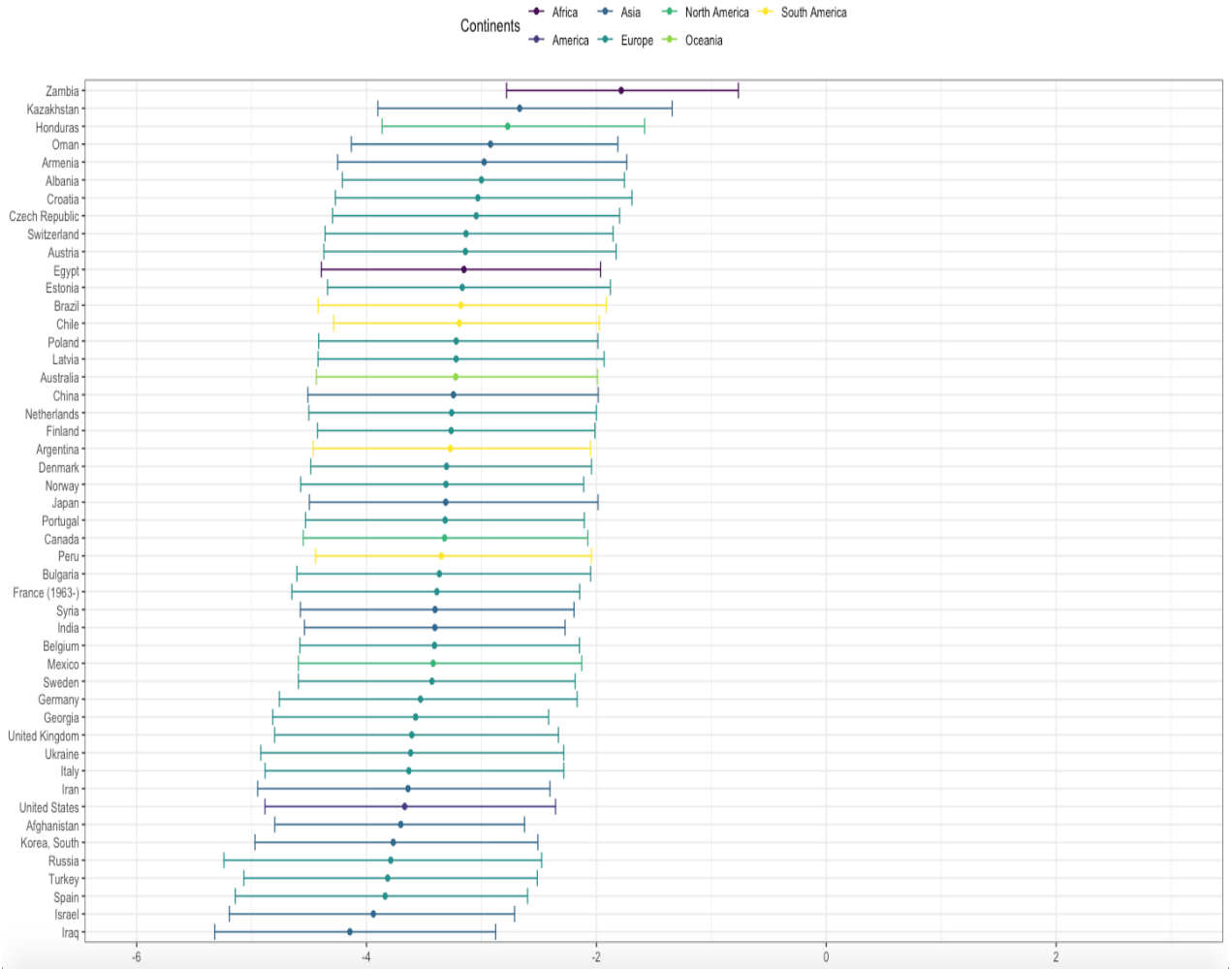


Fig. 1. Clustering countries by the continents

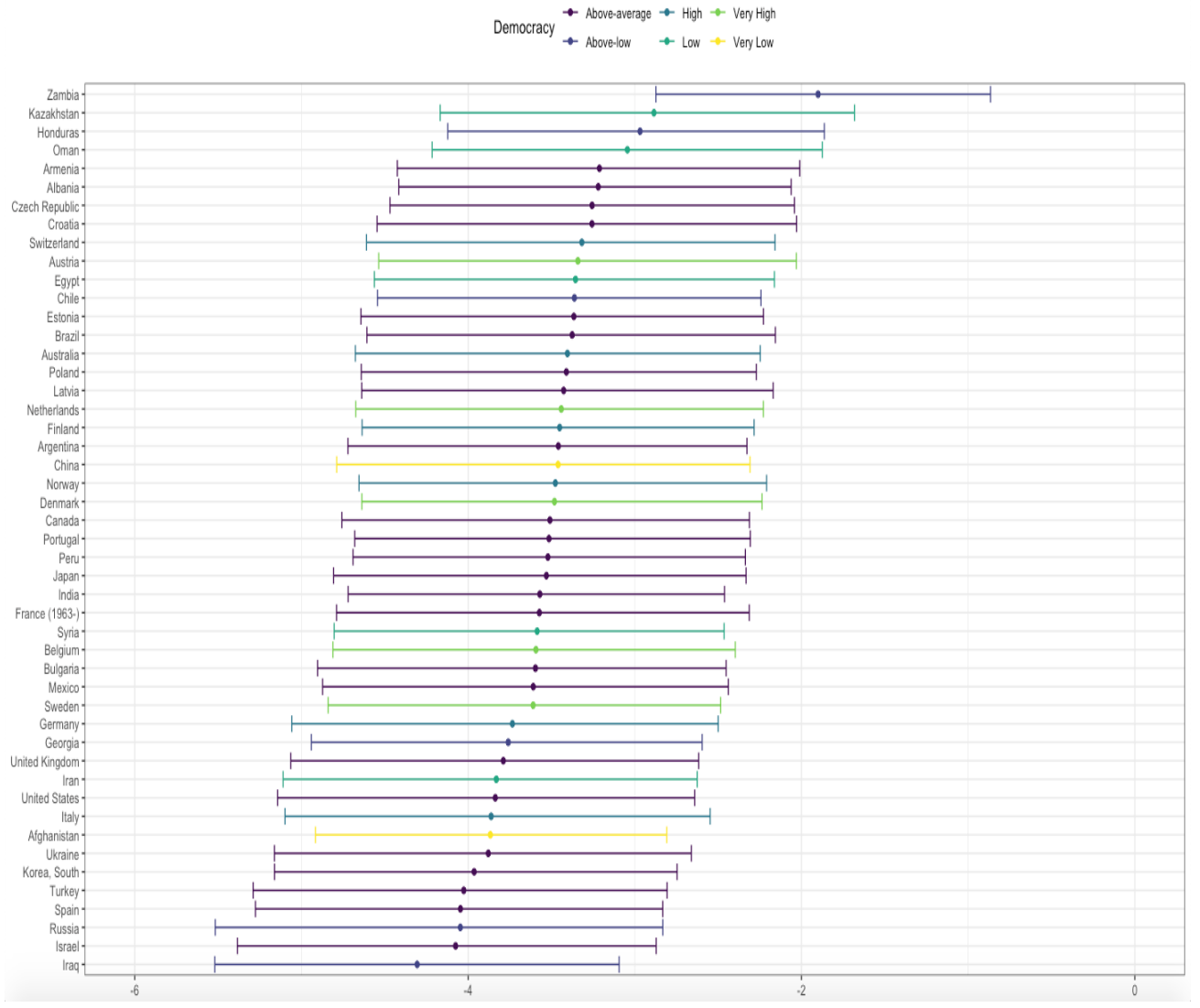


Fig. 2. Clustering countries by the level of democracy



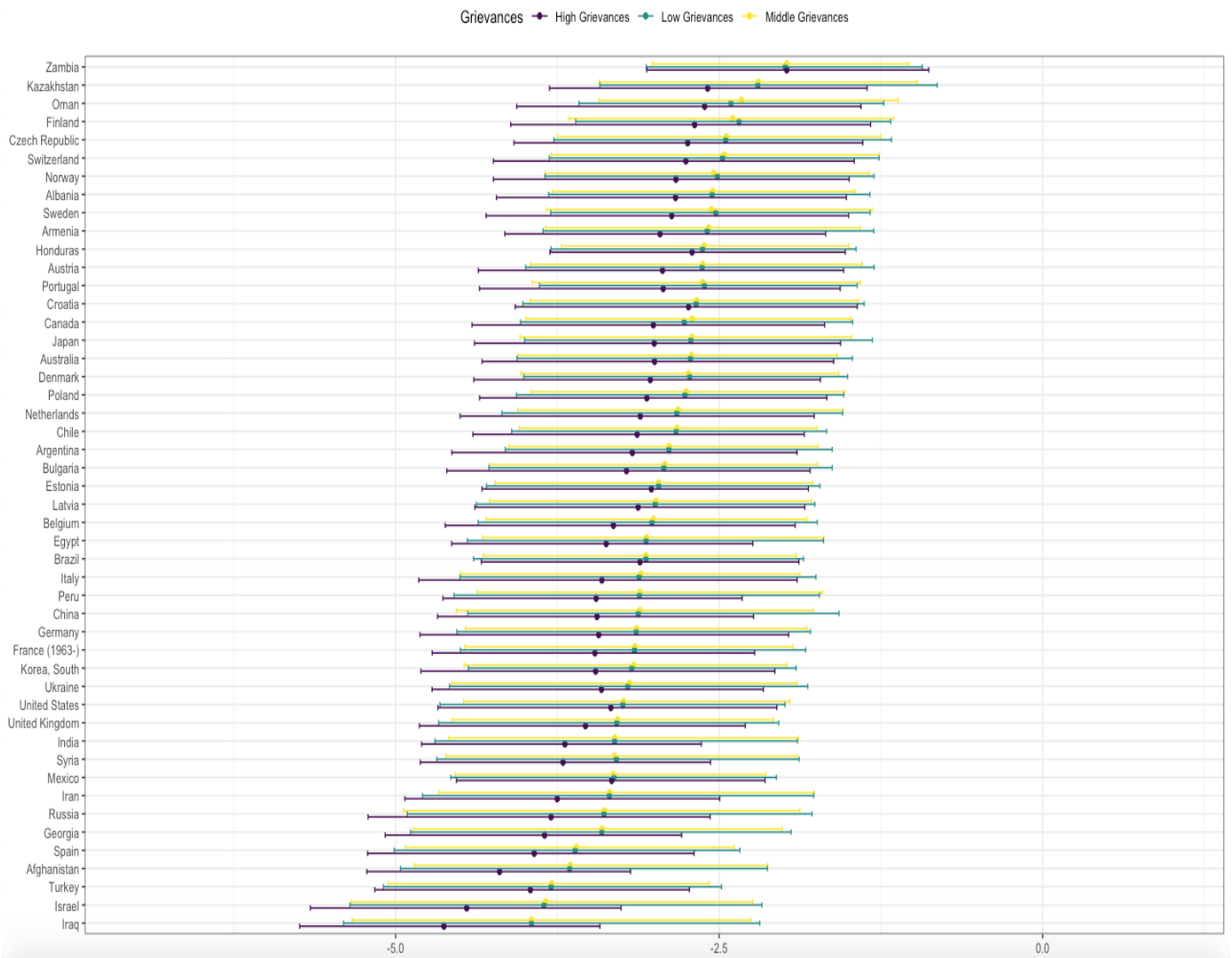


Fig. 3. Clustering countries by the effects of grievances

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