

Testing for Correlation between Regime Typology and Personal Efficacy in Pew Global Survey Data

Dominique Awis

September 21, 2017

Political Research
Instructor: Prof. Nowlin
College of Charleston

1 Introduction

Political philosopher John Stuart Mill famously theorized that participation in the political process will give an individual the belief that he/she has control over his/her life.¹ Mill argues that participation, a behavior, will influence a belief, control. To Mill's credit, Bandura (1969) and Bem (1970) have shown empirically that behavior influences beliefs.²

Psychologists define this specific belief of having control through one's actions as 'efficacy'. The psychological mechanism behind this theory of behavior and belief may be that through political participation, an individual has more control over his/her liberties and government and this will therefore encourage the individual to believe he/she has more control over his/her life.

This theory of political participation and efficacy can be tested empirically.

¹Michael E. Morell. "Deliberation, Democratic Decision-Making and Internal Political Efficacy". In: *Political Behavior*. Vol. 27-1, pp. 49–69.

²George Balch. "Multiple Indicators in Survey Research: The Concept Sense of Political Efficacy". In: *Political Methodology*. Vol. 1-2, pp. 1–43.

Because democratic governments permit individuals to access formal channels by which to participate in political processes, efficacy in the individual can be investigated and compared with the efficacy of individuals residing in non-democratic regimes. If democracy were to have an effect, states can be sorted by regime typology and ordered to investigate the increase in democratic characteristics.

In the spirit of Mill, this study will explore democracy, the individual, and the scientific method to challenge two assumptions: 1) individuals living in democratic regimes are probabilistically more likely to be efficacious than individuals in non-democratic regimes; and 2) an increase in democratic characteristics within a regime will increase the probabilistic likelihood that an individual will be efficacious.

2 Literature Review

The purpose of this study is to investigate if the behavioral aspects of democratic citizenry such as, if an individual is permitted the political rights of participation, how will this affect the efficacious belief of the individual. In democratic countries, citizens participate in the election of political leaders using both indirect and direct methods as well as various other forms of formal political participation not observed in non-democratic regimes. This participation gives citizens the rights to exercise certain liberties and have more control over laws and political decisions than that of non-democracies. This study will investigate if efficacy is specific to democratic countries in particular or if it is indeed a shared belief with that of other regime typologies.

The degree to which regime typology can affect the beliefs of individuals deserves further investigation; questions arise such as: are a substantial number of individuals residing in democracies more likely to exhibit certain a political culture of specific beliefs? Political culture can be best defined through terms such as political or national values, goals, beliefs, perceptions, ideology, and norms.³ This study may support the theory that individuals in democratic countries exhibit a similar democratic political culture such that efficacy will be a shared ethos within the culture. It is interesting to note, the more ef-

³Ruth Lane. "Political Culture: Residual Category or General Theory?" In: *Comparative Political Studies*. Vol. 25:3, pp. 362–365.

efficacious an individual, the more favorable the individual is to democratic regimes.⁴ Robinson (1968), Campbell (1959), Douvan and Walker (1956), and Lane (1959) claim the more efficacious an individual, the more the individual believes he/she can master his/her nonpolitical environment,⁵ but not necessarily his/her political environment.

Theorists hypothesize decision-making participation will raise the efficacy belief in an individual,⁶ however this may not be extended to individuals living in democratic regimes who do not participate. Political participation is correlated positively with political efficacy.⁷ Berry, Portney, and Thomson (1993) have found that political participation is related to efficacy and it influences efficacy more so than efficacy influences participation.⁸ These studies are important to consider when establishing if there is a reverse causal relationship between the variables under investigation; causality cannot be determined if participation does not precede efficacious belief in time.

Pew measures efficacy by asking individuals if he/she believes hard work will guarantee success. This specific belief is important when investigating the mechanism behind efficacy. First, the hard-work-leads-to-success belief is known to psychologists as the Protestant work ethic. The Protestant work ethic is the rational belief in disciplined hard work, attributed to Protestant asceticism.⁹ The Protestant work ethic is measured through responses to questions such as, “Hard work offers little guarantee of success,” and “If one works hard enough, one is likely to make a good life for oneself,”¹⁰ similar to the question this study has asked individuals that serves as this study’s dependent variable. Second, Pew using the hard-work-success belief as an indicator of personal efficacy can be supported by Ghorpade et al (2006) who found that the hard-work-success belief correlates with Locus of control vari-

⁴Balch, “Multiple Indicators in Survey Research: The Concept Sense of Political Efficacy”.

⁵Ibid.

⁶Ibid.

⁷Carole Pateman. *Participation and Democratic Theory*. Cambridge University Press, 1970.

⁸Morell, “Deliberation, Democratic Decision-Making and Internal Political Efficacy”.

⁹Jia Ghorpade, Jim Lackritz, and Gangaram Singh. “Correlates of the Protestant Ethic of Hard Work: Results From a Diverse Ethno-Religious Sample”. In: *Journal of Applied Social Psychology*. Vol. 36-10, pp. 2450–2473.

¹⁰Ibid.

ables such that individuals with higher level Locus of Control scored higher on the hard-work-success belief.¹¹

The Locus of control measures the link between one's actions and resulted outcomes.¹² This is important because the degree to which an individual believes themselves to have control is important in establishing the degree to which an individual is efficacious. It is also important to note that the Locus of control belief is a socially reinforced behavior, not a personality trait.¹³ Thus, environmental conditions may influence this behavior. Lefcourt (1991) concluded individuals with high levels of Locus of Control believe that 1) he/she has control over his/her future, and 2) applied work will affect outcomes.¹⁴ Triandis (1984) has shown that Locus of Control is a cultural construct that relates to beliefs about nature and human interactions.¹⁵ Perhaps living within a democratic regime may influence this cultural construct.

Locus of Control is important when establishing the causal relationship of regime and efficacy; it is probable regime typology can socially reinforce behavior such as efficacious belief. In one study by Tobacyk (1992), the Locus of control belief was measured in individuals before and after democratization in Poland to test whether the belief was a belief inherent to democratic culture. The study found the Locus of control belief to be increased concerning political control, but not personal control.¹⁶ The hard-work-leads-to-success belief is considered personal control which can be influenced by "life-reinforcements" such as the economy, employment, and health care.¹⁷ Poor life-reinforcements can result in lower levels of personal control. It will be important to investigate confounding variables to determine if there is

¹¹Ghorpade, Lackritz, and Singh, "Correlates of the Protestant Ethic of Hard Work: Results From a Diverse Ethno-Religious Sample".

¹²Ibid.

¹³Iva Ellen Deutchman. "Internal-External Locus of Control, Power, and Political Participation." In: *Psychological Reports*. Vol. 57, pp. 835–843.

¹⁴John A. McCarty. "The Influence of Individualism, Collectivism, and Locus of Control on Environmental Beliefs and Behavior". In: *Journal of Public Policy and Marketing*, vol. 20:1, pp. 93–104.

¹⁵Ibid.

¹⁶Jerome J. Tobacyk. "Changes in Locus of Control Beliefs in Polish University Students Before and After Democratization". In: *Journal of Social Psychology*. Vol. 132:2, p. 217.

¹⁷Ibid.

a correlation between "life-reinforcement" variables such as an individual's perceived economic situation and efficacy. This will help determine if the relationship between regime typology and efficacy is spurious.

3 Hypothesis

Mill's theory that participation will give an individual the belief he/she can control his/her life will serve as the hypothesis of this study. This study hypothesizes that 1) individuals living in democratic regimes will be more likely to be efficacious than individuals living in non-democratic regimes, and 2) democratization will increase likelihood of efficacy. This hypothesis is guided by the theory that if an individual's ability to change their political situation is increased, the likelihood that they will be more likely to believe themselves able to change their personal situation will also increase.

4 Data and Analysis

4.1 Data

To test the hypothesis, data will be taken from the Pew Global 2012 survey of 21 countries. The independent variable of this study will be the 21 countries surveyed sorted into various regime typologies such as "full democracies", "flawed democracies", "hybrid regimes," and "authoritarian regimes" as determined by The Economist Intelligence Unit 2013 (EIU).¹⁸ Out of the 21 countries surveyed, 13 are democratic countries (full and flawed) and 8 are non-democratic (hybrid and authoritarian) countries.¹⁹ The democratic countries are Brazil, Britain, Czech Republic, France, Germany, Greece, India, Italy, Japan, Mexico, Poland, Spain, and the United States; the non-democratic countries are China, Egypt, Jordan, Lebanon, Pakistan, Russia, Tunisia, and Turkey.²⁰

The EIU measured the state of democracy in most countries in the world based on criteria such as the fairness of the electoral process, the functioning

¹⁸The Economist Intelligence Unit EIU. In: *Democracy Index 2012: Democracy at a Standstill*. 2013.

¹⁹Ibid.

²⁰Ibid.

of government, citizen political participation, political culture in individuals, and civil liberties individuals have within the state.²¹ Such criteria are arguably required for a state to be considered as a fully-functioning democracy. Although Kellstedt and Whitten (2013) regard democracy as a difficult variable to measure systematically,²² in this study, the EIU is given full authority on regime typology measurements because the 2012 dataset is 1) easily accessible, and 2) remains largely uncontroversial (except Russia's regression from hybrid to authoritarian regime between 2010 and 2011 has been criticized; see: "Democracy index 2011: Democracy under stress"; EIU, 2011).

To test personal efficacy in individuals, the Pew Global Survey of 2012 asked individuals (Q84): "Which statement comes closer to your own views, even if neither is exactly right? 1) Most people can succeed if they are willing to work hard; or 2) Hard work is no guarantee of success for most people." If an individual agrees "Most people can succeed if they work hard", this indicates efficacy; the high majority of respondents chose either beliefs rather than "no response" or "neither/both."²³

There is no indication that there would be a lag or time difference in the causal process of the correlation, therefore, both the independent and dependent variable measured used 2012 datasets.

4.2 Analysis

4.2.1 Categorical Analysis

To investigate the question: 1) Are individuals living in democratic regimes more likely to be efficacious than individuals in non-democratic regimes, a tabular analysis was performed; the dependent variable, efficacy, and the independent variable, regime typology (ie. democracy, non-democracy) are treated as categorical. As illustrated in Table 1, non-efficacious and efficacious individuals were sorted by regime typology measurement. A χ^2 test for tabular association was performed to analyze the significance of the relation-

²¹EIU,

²²Paul M. Kellstedt and Guy D. Whitten. *The Fundamentals of Political Science Research*. New York: Cambridge University Press, 2013.

²³The Pew Research Center Pew. *Global Attitudes and Trends*. Spring 2012 Survey Data, 2014.

ship between the dependent and independent variables.

$$\chi^2 = 7.4383, df = 1, p\text{-value} = 0.006385 **$$

	Non-Efficacy	Efficacy
Non-Democracy	3872	6072
Democracy	5410	9130

Table 1: Regime and Personal Efficacy Observations.

4.2.2 Predicted Probabilities

To examine the predicted probability that an individual would be efficacious relative to regime, a categorical analysis was performed by distributing individuals who tested as efficacious into regime typologies such as authoritarian, hybrid regime, flawed democracy and full democracy. The resultant probabilities than an individual, given regime, would be efficacious if he/she lived within the regime is illustrated in Table 2.

	Regime	Probability
1	Authoritarian	0.55
2	Hybrid	0.63
3	Flawed Democracy	0.61
4	Full Democracy	0.58

Table 2: Predicted Probability of Efficacy Of Individual within Regime.

4.2.3 Simple Logistic Regression and Multiple Logistic Regression

To determine if democratization can increase the probabilistic likelihood of an individual having personal efficacy, a simple and multiple logistic regression analysis was performed using the dependent and independent variables, as seen in Tables 3 and 5.

The dependent variable of this analysis was coded as a “dummy” variable in purpose to interpret the probability an individual would be efficacious given an increase in democratic characteristics of regime, or rather an increase

in democracy on the regime typology scale: Authoritarian \rightarrow Hybrid \rightarrow Flawed Democracy \rightarrow Full Democracy. The scale begins at authoritarian and increases by unit toward full democracy. The purpose of the regression analysis is to determine if the democratic characteristics increase, will the likelihood of efficacy also increase. The simple logistic regression tests for correlation between the dependent and independent variables of the hypothesis and the multiple logistic regression tests for correlation between the dependent variable and many independent variables that can be potential causal influences.

Multiple variables taken from the Pew Global 2012 survey were tested along with the regime typology scale to control for potential confounding variables. Variables such as age (which is increasing), gender (male), and lastly, in purpose to test for confounding variables, economic factors such as "life reinforcements" were examined.

The life reinforcement variables were 1) perceived economic condition that gets "better" as this variable increases, 2) perceived situation in comparison with parents such that as this variable increases, the "better" the situation of the individual is than his/her parents were at the same age, and 3) increasing ease of becoming wealthier than one's parents such that as this variable increases, the individual perceived it to be easier to become wealthier than his/her parents in this period of time.²⁴

5 Results

5.1 Categorical Analysis

Regarding the results of the categorical analysis, a null relationship between democracy and efficacy is not supported given the statistical significance of the relationship between the variables. As illustrated in Table 1, the χ^2 calculation demonstrates a statistically significant relationship to a moderate degree. This is determined by the p-value which indicates there is a relationship between the variables. Individuals living in democratic regimes are more likely to be efficacious than individuals in non-democratic regimes.

²⁴Pew, *Global Attitudes and Trends*.

Table 3: Simple Logistic Regression.

	<i>Dependent variable:</i>
	Efficacy
Regime Typology Scale	0.036*** (0.012)
Constant	0.285*** (0.035)
Observations	24,484
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Table 4: Confidence Intervals of Simple Logistic Regression.

	2.5 %	97.5 %
(Intercept)	0.217	0.354
Regime Typology Scale	0.012	0.060

Table 5: Logistic Regression of Multiple Variables.

	<i>Dependent Variable:</i>
	Efficacy
Regime Typology Scale	0.038** (0.014)
Male	−0.026 (0.027)
Age	−0.004*** (0.001)
Economic Situation	0.259*** (0.019)
Ease of Becoming Wealthier than Parents	0.116*** (0.017)
Parents' Compared Economic Situation	0.108*** (0.012)
Observations	22,989
<i>Note:</i>	*p<0.5; **p<0.01; ***p<0.001

Table 6: Confidence Intervals of Multiple Logistic Regression.

	2.5 %	97.5 %
(Intercept)	-0.915	-0.636
Regime Typology Scale	0.012	0.065
Male	-0.079	0.028
Age	-0.006	-0.003
Economic Situation	0.223	0.296
Ease of Becoming Wealthier than Parents	0.084	0.149
Parents' Compared Economic Situation	0.083	0.132

5.2 Predicted Probabilities

Regarding the results of the predicted probabilities analysis, as illustrated in Table 2, the predicted probabilities table shows that an individual living in democratic regime is 58% likely to be efficacious, while in authoritarian regimes, individuals are 55% likely to be efficacious. This difference is not convincingly supportive of the hypothesis given the probabilities between the given regimes vary only slightly. It is interesting that among all regime typologies, an individual is more likely to have efficacious belief than not.

5.3 Logistic Analysis of Single and Multiple Variables

The simple logistic regression result is not supportive of the null hypothesis because the relationship is a positive, highly significant correlation such that an increase in the democracy scale increases the likelihood of efficacy. The results of the multiple logistic regression analysis show, as illustrated in Table 5, as democratic characteristics increase, the likelihood of efficacy increases; this relationship is only moderately statistically significant to the degree that for every unit increased on the democracy scale, an individual is four percent more likely to be efficacious.

While logistic regression may exclude the null hypothesis and correlation has been found, this does not necessarily support a causality between regime typology and efficacy; there is also the strong correlation between economic factors and efficacy to a high level of statistical significance. As the economic situation gets better for the individual, this increases the likelihood of effi-

cacy per unit of betterment by twenty-six percent.

As an individual believes it is increasingly easier to become wealthier than his/her parents as well as if an individual believes he/she has a better economic situation than his/her parents, the individual is more likely to have efficacious belief to a high level of significance.

While these results support prior studies that have shown economic factors influence personal efficacy in individuals, this was not evidence political factors such as democratic characteristics influence personal efficacy. Tobacyk (1992) showed that political factors such as democratization will influence political efficacy but not personal efficacy.²⁵

6 Conclusion

While Mill's hypothesis cannot be strongly supported in this study as confounding variables may make the potential causal relationship spurious, his theory has not lost support; there is indeed evidence to support a correlation between participation and efficacy. It can be entirely possible that political participation can increase the belief an individual holds that he/she has control over his/her life as well as that individuals in democracies are, almost by extension, likely to be efficacious.

Considering political participation and efficacy, this has been an interesting study of how politics and economics can potentially affect behaviors and beliefs. A final thought regarding universals among individuals: any individual is more likely to be efficacious than not efficacious across the entire regime spectrum; this suggests that individuals, no matter the cultural or political influence, hold a commonly-shared belief.

References

Balch, George. "Multiple Indicators in Survey Research: The Concept Sense of Political Efficacy". In: *Political Methodology*. Vol. 1-2, pp. 1-43.

²⁵Tobacyk, "Changes in Locus of Control Beliefs in Polish University Students Before and After Democratization".

- Deutchman, Iva Ellen. "Internal-External Locus of Control, Power, and Political Participation." In: *Psychological Reports*. Vol. 57, pp. 835–843.
- EIU, The Economist Intelligence Unit. In: *Democracy Index 2012: Democracy at a Standstill*. 2013.
- Ghorpade, Jia, Jim Lackritz, and Gangaram Singh. "Correlates of the Protestant Ethic of Hard Work: Results From a Diverse Ethno-Religious Sample". In: *Journal of Applied Social Psychology*. Vol. 36-10, pp. 2450–2473.
- Kellstedt, Paul M. and Guy D. Whitten. *The Fundamentals of Political Science Research*. New York: Cambridge University Press, 2013.
- Lane, Ruth. "Political Culture: Residual Category or General Theory?" In: *Comparative Political Studies*. Vol. 25:3, pp. 362–365.
- McCarty, John A. "The Influence of Individualism, Collectivism, and Locus of Control on Environmental Beliefs and Behavior". In: *Journal of Public Policy and Marketing*, vol. 20:1, pp. 93–104.
- Morell, Michael E. "Deliberation, Democratic Decision-Making and Internal Political Efficacy". In: *Political Behavior*. Vol. 27-1, pp. 49–69.
- Pateman, Carole. *Participation and Democratic Theory*. Cambridge University Press, 1970.
- Pew, The Pew Research Center. *Global Attitudes and Trends*. Spring 2012 Survey Data, 2014.
- Tobacyk, Jerome J. "Changes in Locus of Control Beliefs in Polish University Students Before and After Democratization". In: *Journal of Social Psychology*. Vol. 132:2, p. 217.