

United Nations “Persons of Concern” and the Environment in State of Origin

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Executive Summary

Studies evaluating the causes of forced migration are often narrow and fail to analyze relationships on an international level. This study seeks to determine what kind of internal state environments lead to increases in forced migration, specifically refugees and internally displaced persons (persons of concern). The data used in this study are a compilation of data provided by the World Bank, the United Nations (UN), and the Central Intelligence Agency (CIA); including information regarding the internal environments of 191 states. Using the ordinary least squares regression model, four hypotheses are tested to determine if any relationship exists between four independent variables and the number of UN persons of concern. Specifically, gross domestic product (GDP) per capita, government effectiveness, Gini coefficient of income equality, and ethnic fractionalization are tested. The findings suggest that there are correlations at the 0.01 level between government effectiveness, ethnic fractionalization, and UN populations of concern. GDP per capita and the Gini coefficient of income equality failed to have a statistically significant relationship with UN persons of concern. These findings suggest that international development policies aimed at preventing refugees and internally displaced persons should focus on ethnic tensions and effective internal government policies.

Introduction

In 2008, the United Nations recognized 34 million refugees and internally displaced persons as “persons of concern.” These individuals, recognized by the United Nations (UN), fall into three classifications: refugees, refugees seeking asylum, and internally displaced persons. Factors such as conflict, human rights abuses, climate change and extreme poverty are thought to contribute to a rise in these populations.¹ By 2051, it is estimated that the Earth’s population will reach 9 billion people, an increase of 2.3 billion from 2010. The majority of this increase will take place in developing countries and regions where the majority of persons of concern originate.² As the populations in these regions grow, the number of forced migrants is expected to increase. As forced migrant populations grow exponentially, the United Nations will have to adapt and create policies that more successfully prevent forced migration. To best address forced migrant policies, more studies that allow policymakers to better understand the relationship between a state’s internal environment and its number of forced migrants need to be conducted.

This paper seeks to determine the relationships that exist between a country’s internal environment and the number of persons of concern that originate from it. Currently, the UN only works with certain types of forced migrants, refugees, and internally displaced persons. This study will combine the two types of forced migrants into the respective category of “persons/population(s) of concern.” By combining data from the 2008 Central Intelligence Agency (CIA) Factbook, 2008 World Bank statistics, and a 2009 UN report on forced migrants, this paper will use statistical analysis to detect if there is a relationship between the number of persons of concern originating from a state, and various internal environment indicators. Following an overview of existing literature on persons of concern and internal state factors contributing to their movement, four hypotheses of the study will be outlined alongside brief descriptions of these hypotheses. Next, sections describing the data and variables used will be presented. Following, there will be a section describing the methods used and the corrections made to data. A section providing the hypotheses tests’ results will follow. The conclusion will outline implications of the study, detail any methodological problems, and provide a discussion of future research.

Literature Review

Most studies evaluating the causes of persons of concern limit themselves to specific cases. These studies evaluate particular environments within states that have caused large populations of concern. A great deal of emphasis from scholars has been placed on evaluating particular states and regions. There have been few studies that evaluate the general factors that create populations of concern internationally.

The majority of studies on forced migrants cite safety and security concerns as the main reason for movement of the deracinated populations.³ These studies evaluate how forced

1 António Guterres, “The Coming Storm,” *Perspective* (spring 2010): 6.

2 *Ibid.*, 6.

3 Susan Martin, “Forced Migration and the Humanitarian Regime,” in *Population Resettlement in International Conflicts*, eds. A.M. Kacowicz & P. Lutomski (New York: Lexington Books, 2007), 1 – 18.

migrants are the result of internal state turmoil. For example, Moore and Shellman found that “people always leave in the presence of high level violence.”⁴ Other publications have noted that violent conflicts create human rights abuses and inevitably cause the migration of vulnerable populations.⁵ The majority of these conflicts occur as internal civil wars, targeting certain civilian populations. In some cases, conflicts have spilled into neighboring countries and created new forced migrant populations. Some studies have found that the migration of individuals intensifies conflict, and ultimately creates more populations of concern.⁶

There are numerous factors that may contribute to forced migration. Martin and Schoenholtz found a number of causes leading to an increase in forced migrant populations, including human rights abuses, repression, conflict, natural disaster, and persecution.⁷ Due to the different factors that can lead to forced migrant populations, some studies have created classifications for different types of forced migrants. This was done to more adequately identify the causes and factors leading to the forced migration of populations. Most studies break forced migrant populations into four categories: refugees, internally displaced persons, environmental migrants, and development-induced migrants.⁸ In these studies, refugee populations are the product of internal conflict and persecution; these populations cross international borders to seek refuge. Internally displaced persons are the result of “armed conflict, situations of generalized violence, violations of human rights, or natural human-made disasters.”⁹ Internally displaced populations remain within the borders of their state of origin. Environmental migrants are displaced due to environmental changes and natural disasters that have left their homeland uninhabitable, while development-induced migrants are people forced to migrate because of development projects and new infrastructures.¹⁰

Environmental and development-induced migrants are newer concepts; as a result, the majority of research on specific populations focuses on refugee and internally displaced persons. Some studies evaluate the similarities and differences of refugees and internally displaced persons (IDPs). These studies cite four major causes of conflict and violence that lead to greater populations of concern. These conflicts are sometimes due to group inequalities, private motivation, failure of the social contract between a government and its citizens, and economic factors.¹¹ Some studies cite the role of a person’s state, and neighboring states, as the primary difference between refugees and internally displaced persons, instead of judging by the type of conflict. These studies find that refugee populations, compared to internally displaced persons, are a positive function of civilian targets by their governments; as govern-

4 Will Moore and Stephen Shellman, “Refugee or Internally Displaced Person?” *Comparative Political Studies*, Vol. 39, no. 5 (2006) 599 – 622.

5 Susan Martin and Andrew Schoenholtz, “Promoting the Human Rights of Forced Migrants,” in *Human Rights & Conflict*, eds. J. Mertus and J. Helsing (Washington, DC: United States Institute of Peace Press, 2006), 405 – 429; and Chandra Sriram, Olga Martin-Ortega, and Johanna Herman, *War, Conflict, and Human Rights* (London: Routledge, 2010), 3 -12.

6 Martin and Schoenholtz, 405- 429.

7 Martin and Schoenholtz, 405 – 429.

8 Martin and Schoenholtz, 405 – 429; and Martin, 1 -18.

9 Martin and Schoenholtz, 405 – 429; and Martin, 1 -18.

10 Martin and Schoenholtz, 405 – 429; and Martin, 1 -18.

11 Frances Stewart, “Root Causes of Violent Conflict in Developing Countries,” *British Medical Journal*, Vol. 324, no. 7333 (February 2002) 342 -345.

ments target civilian populations, it becomes more likely that a population will flee the country and be regarded as refugees. Other factors that contribute to whether a forced migrant remains in his or her state as an IDP or flees as a refugee include: bordering states' sentiments toward refugees, labor wages, and the overall human rights environment of neighboring states.¹²

Hypotheses

Hypothesis Test 1:

The first hypothesis test will evaluate the relationship between the number of persons of concern and the gross domestic product (GDP) per capita. The personal agendas and ethnic inequality categories of conflict often originate due to tensions regarding poverty level.¹³ Although GDP is a measurement of average wealth and does not measure poverty, it does provide insight into the availability of resources a government can use to address and alleviate poverty. This test will evaluate the relationship between the GDP per capita and the number of persons of concern originating in the state.

H₁: States with lower per capita GDP will have larger populations of concern.

Hypothesis Test 2:

The second hypothesis test will evaluate the relationship between populations of concern and the effectiveness rating of the government. Again, this test will evaluate the internal conditions of states and the states' relationships with persons of concern. Governments with lower effectiveness ratings are less likely to provide essential services, leading to inequalities and an inability to fulfill the social contract, making it more likely for conflict to occur and a population of concern to form.¹⁴

H₂: States with lower government effectiveness ratings will have larger populations of concern.

Hypothesis Test 3:

The third hypothesis test will evaluate the relationship between the number of persons of concern and the equality of income and wealth expressed by the Gini coefficient. High levels of income inequalities can result in poverty and ethnic tensions, possibly creating conflict and leading to more persons of concern.¹⁵

H₃: States with higher income inequalities will have larger populations of concern.

¹² Will Moore and Stephen Shellman, "Refugee or Internally Displaced Person?" *Comparative Political Studies*, Vol. 39, no. 5 (2006) 599 – 622.

¹³ Frances Stewart, 342 – 345.

¹⁴ Frances Stewart, 342 – 345.

¹⁵ Frances Stewart, 342 – 345.

Hypothesis Test 4:

The fourth hypothesis test will evaluate the relationship between populations of concern and the ethnic fractionalization within the state. States with high ethnic fractionalization may be more vulnerable to ethnic tensions, which could lead to conflict and more persons of concern.¹⁶

H₄: States with higher ethnic fractionalization will have larger populations of concern.

Data

The data are from a combination of sources that provide analysis for internal conditions of 191 states. The majority of the data were compiled during 2008; some variables were collected prior to 2008 and some in 2009. Variables in the dataset were collected based on observations and reports by states, state agencies, international organizations, and think tanks. Examples of agencies that collected data are: the CIA, the UN, and the World Bank.

The unit of analysis in the study is states. The data seem to be representative of the population. Given the creditability and reputation of the sources of the data, we can assume that there will be few methodological problems, though inaccurate recording of the data is one potential problem that may have occurred during collection. Another possible problem could be that different recording standards existed between the various sources combined into the dataset. With regards to this study, there could be errors regarding the representation of persons of concern in 2008. Given the sources of the data, source creditability, and the observations in the data, it can be assumed that the effects of the potential errors have been minimized.

Variables

This study will utilize five variables in its hypothesis tests; however, the regression model will use seven interval-ratio variables and one ordinal variable. The variables used in the hypothesis tests include: UN persons of concern (logged); GDP per capita (logged); government effectiveness; UN Gini coefficient; and ethnic fractionalization. Control variables in the regression model include: years since last regime change; percent of women in the legislature; and number of members in the district. The variable region will be used to cluster robust standard errors. The descriptive statistics for each variable can be seen in Table 1 and will be discussed in greater detail in this section.

Dependent Variable: Persons of Concern

The study's dependent variable is interval-ratio and accounts for those forced migrants recognized by the United Nations as 'persons of concern.' The variable is organized by state of origin and accounts for all persons under the watch of the United Nations High Commissioner for Refugees. Due to a large variation in observations, the variable has been logged. This variable includes all formally recognized refugees and refugees seeking asylum. Also, the

¹⁶ Frances Stewart, 342 – 345.

United Nations has been able to recognize and record some, but not all, internally displaced persons. The dependent variable does not account for development or environmental forced migrants. This variable has been recorded and coded by individuals, meaning that it is possible that there were errors made when recording the data. There are 184 observations for this variable, ranging from 1 to 4,797,979 with a mean of 148,038.7 and a standard deviation of 562,412.1.

Table 1: Descriptive Variable Statistics

Variable	Mean	Standard Deviation	Minimum	Maximum	Number of Observations
Persons of Concern	148,038.7	562,412.1	1	4,797,979	184
GDP Per Capita	13,828.08	16,881.95	188	118,040	175
Government Effectiveness	45.768	23.442	0	100	186
Gini Coefficient 2008	40.743	9.999	24.7	74.3	127
Ethnic Fractionalization	0.439	0.257	0	.93	188
Years Since Last Regime Change	22.488	30.409	0	191	160
Percent of Women in Legislature	16.189	11.454	0	56.3	191
Number of Members in District	1.694	0.849	1	3	147
Region	2.927	1.703	1	6	191

Independent Variable: GDP Per Capita

This interval-ratio variable captures data collected by the World Bank on the Gross Domestic Product (GDP) per capita in each country. The data report US dollar values during the 2008 calendar year. The GDP per capita ranges from \$188 to \$118,040 with a mean of \$13,828.08 and a standard deviation of 16,881.95. Due to the large variation in data, the variable will be logged for the regression model. The variable was collected using information available to the World Bank; therefore, it is possible that there were reporting errors and missing data that may have created methodological limitations.

Independent Variable: Government Effectiveness Rating

The government effectiveness rating is based on the World Bank's government effectiveness index. In this study the rating are on a scale of 0 to 100 summarizing the quality, independence, and creditability of the government in the public sector. The World Bank creates their index based on the perception of quality of the civil service, quality of public policies and formation, quality of public service, independence of political pressures, and the creditability of the government to commitment on public policies and services. In this study, a score of 0 would be extremely ineffective, and a score of 100 would be extremely effective. In this dataset the variable ranges from 0 to 100 percent effectiveness with a mean of 45.768 percent and a standard deviation of 23.442. There are 186 observations captured by the variable. Since the World Bank uses country and other organizations' information to create this statistic, there is an increased likelihood that errors exist in the recording of the data.

Independent Variable: UN Gini Coefficient

The 2008 United Nations Gini coefficient is a measurement expressing the equality of income and wealth. The coefficient usually is expressed from a range of 0 to 1, with 1 expressing maximum inequality. This data will use the Gini coefficient on a scale of 1 to 100. As such, the Gini coefficient would range from 0 to 100, instead of 0 to 1. In this dataset of 127 observations, the range of the variable is from 24.7 to 74.3 with a mean of 40.743 and a standard deviation of 9.999. Since the Gini coefficient is derived from a mathematical calculation, it is possible that errors were made during calculation which could lead to reporting errors. Likewise, the calculations were based upon reports and information received from the countries involved, making the information vulnerable to reporting bias and recording error.

Independent Variable: Ethnic Fractionalization

Ethnic fractionalization represents the percent of linguistic and racial division within a country. There are 188 observations for this variable. In the dataset, the variable ranges from 0 to 0.93. A value of 0 is the least ethnically fractionalized, and a value of 1 expresses great ethnic fractionalization. The mean of the variable is 0.439, and the standard deviation is 0.257. This variable is based on reports from organizations and governments that have been transferred to a database. For this reason, it is likely that reporting errors were made collecting or recording the data.

Independent Variable: Years Since last Regime Change

This interval-ratio variable measures the number of years since the last regime change in a country. The variable ranges from 0 to 191 years and has 160 observations. The mean amount of time since the last regime change is 22.488 years, with a standard deviation of 30.409. Since there are mostly reliable sources recording regime transitions, possible errors should be minimized. However, it is important to remember that there could have been recording errors during the transfer of information to the dataset, creating limitations on the study's results.

Independent Variable: Percent of Women in Legislature

The percent of women in the legislature is recorded by the UN and represents the percentage of seats in a state's national parliament held by women. The variable is interval-ratio and has 191 observations. In this dataset, the variable ranges from 0 to 56.3 percent with a mean of 16.189 percent and a standard deviation of 11.454. Errors that could limit the usefulness of this variable include reporting bias and recording errors.

Independent Variable: Number of Members in District

This variable provides insight of the political representation of minority groups. Minority groups are provided more representation in the government in states that have multi-member districts. Usually, states with single member districts are only able to represent the majority's preferences and ideals. Number of members in the district is an ordinal variable consisting of three categories. The variable measures how many elected members (to the legislature) there are per district; a value of 1 means that the district is a single member district. A single member district is a district where one person is elected to the legislature. A value of 2 represents multi-member districts in which a range of two to five representatives per district may be elected. A value of 3 is also a multi-member district, but represents districts in which six or more individuals are elected. Since this variable is categorical, it will be converted into multiple dichotomous variables in the regression model, with a single member district being the reference group. As such, the variable will appear as "omitted" in the regression results table. This variable could suffer from reporting and recording error, which would limit this study's methodological findings.

Independent Variable: Region

Region is an independent nominal variable and assigned a number of 1 through 6, based on a state's regional position. In the regression model, robust standard errors will be clustered by region.

Methods

In order to obtain information on relationships between internal state environments and number of UN persons of concern, this paper uses the ordinary least squares (OLS) multivariate regression model and clusters robust standard errors by region. States will be clustered by six regions: Africa, Asia and the Pacific Islands, North America, South America, Europe, and the Middle East. The OLS model will minimize the sum of squared residuals in order to obtain the best fitting line, and ascertain if a relationship exists between the dependent and independent variables. In order to use OLS, six assumptions must be met. First, the regression model must be linear, correctly specified, and have an additive error term. Second, the error term must have a population mean of 0. Third, explanatory variables may not be correlated with the error term. Fourth, observations of the error term may not be correlated with one another. Fifth, the variance of the error term must be constant. And finally, no independent variable may be a perfect linear function of any other independent variable.

This study has worked to ensure that all assumptions have been met. First, this regression model is linear, it is correctly specified, and it has an additive error term. It appears that no theoretically important variables have been omitted from the regression and that no omitted variable biases exist. Also, the functional form of the regression model is log-linear form. This model was chosen because the variance in the dependent variable was so large and therefore needed to be logged. The log-linear form allows results to be understood by the percentage effects on the dependent variable for every one-unit increase in the independent variable. The second assumption has also been met; theoretically, it can be assumed that the residuals in the model even out and therefore create a population mean of 0 in the error term.

It is possible that the third assumption may not have been met. The study tried to provide an exogenous relationship, where only the independent variables had a causal relationship with the dependent variable. However, it is not possible to say that no endogeneity exists. Although it is clear that the independent variables have a causal relationship with the dependent, it is possible that the dependent variable contributed to some of the independent variables. For example, persons of concern could lead to increased ethnic fractionalization and decreased government effectiveness. Additionally, increases in UN populations of concern could negatively impact GDP and exacerbate inequalities. Endogeneity within the regression model would increase the potential of biased coefficients and artificially deflated standard errors for those independent variables that have an endogenous relationship with persons of concern. This could cause the findings to have Type I errors in which non-significant relationships are found to be statistically significant.

The fourth assumption is met; observations in the error term do not seem to have any correlation with one another.

The fifth assumption that must be met, for OLS regression, is constant variance in the error term, referred to as homoskedasticity. Since the data is clustered by region, robust standard errors will be used which would correct for heteroskedasticity. The final assumption—multicollinearity—is a potential problem in OLS regression models. In order to determine if collinearity between independent variables was an issue in this study, a test of auxiliary regression was performed. By using this test, numerous regression models were run, replacing the dependent variable with each independent variable. Table 2 shows the result of the auxiliary regression test. As can be seen by the model, the “variance inflation factors” are less than 5, meaning that multicollinearity is not a problem in the regression model.

Table 2: Auxiliary Regression for Independent Variables

Variable	VIF	R-squared
GDP per capita (logged)	3.45	0.71
Government Effectiveness	4.18	0.761
Gini Coefficient	1.31	0.239
Ethnic Fractionalization	1.38	0.276
Years since last regime change	2.17	0.539
Percent of women in legislature	1.24	0.193
District size: single member	Omitted	Omitted
District size: 2-5 members	1.31	0.237
District size: 6 or more members	1.69	0.408
Mean	2.09	

Results

The coefficient of determination (R-squared) finds that 39.9 percent of the variation in number of persons of concern is explained by the independent variables, suggesting that 60.1 percent of the variation is explained by the error term. This value would normally suggest that the overall fit of the model is weak; however, given the nature of the dependent variable, it is difficult to determine whether this is an adequate depiction. The R-squared statistic is heavily based on the dependent variable. In this study the dependent variable is based on human behavior in response to emotions and fears of persecution. This makes it hard to determine and explain the relationship of the dependent variables, which in turn makes it difficult to adequately express an overall quality of fit for the model.

Hypothesis Tests

When the OLS regression for the model is run, two out of four hypotheses are found to be statistically significant, and two hypotheses fail to be found statistically significant. The following section will detail each hypothesis test. The theoretical regression model and regression results are provided below and will be discussed in the evaluations for each of the hypotheses tests. Scatter plots will be provided to represent the bivariate relationship between the four independent variables and the dependent variable. It is important to note that the scatter plots are bivariate relationships and that the true relationship of these variables depends on all other independent variables being held constant.

$$\ln Y_i = \beta_0 + \beta_1 \ln X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \beta_6 X_{6i} + \beta_7 X_{7i} + \beta_8 X_{8i} + \epsilon_i$$

Where:

- Y - United Nations persons of concern
- X₁ - Gross Domestic Product (GDP) per capita
- X₂ - Government effectiveness rating
- X₃ - United Nations Gini coefficient
- X₄ - Ethnic fractional-

ization X_5 - Years since last regime change X_6 - Percent of women in legislature X_7 - Dummy variable for number of members in district (2 – 5 members = 1; Others = 0) X_8 - Dummy variable for number of members in district (6 or more = 1; Others = 0)

Table 3: *Dependent Variable: Persons of Concern (logged)*

Independent Variable	Unstandardized Coefficients
GDP per capita (logged)	-0.108 [0.357]
Government effectiveness	-0.057** [0.014]
Gini Coefficient	-0.028 [0.026]
Ethnic fractionalization	3.366** [0.327]
Years since last regime change	0.009 + [0.004]
Percentage of women in legislature	-0.042 [0.042]
Number of members in district – 1 member	Omitted
Number of members in district – 2 - 5 members	-0.621 [0.781]
Number of members in district – 6 or more members	0.164 [0.891]
Constant	11.713*** [3.021]
Number of observations	100
R-squared	0.399

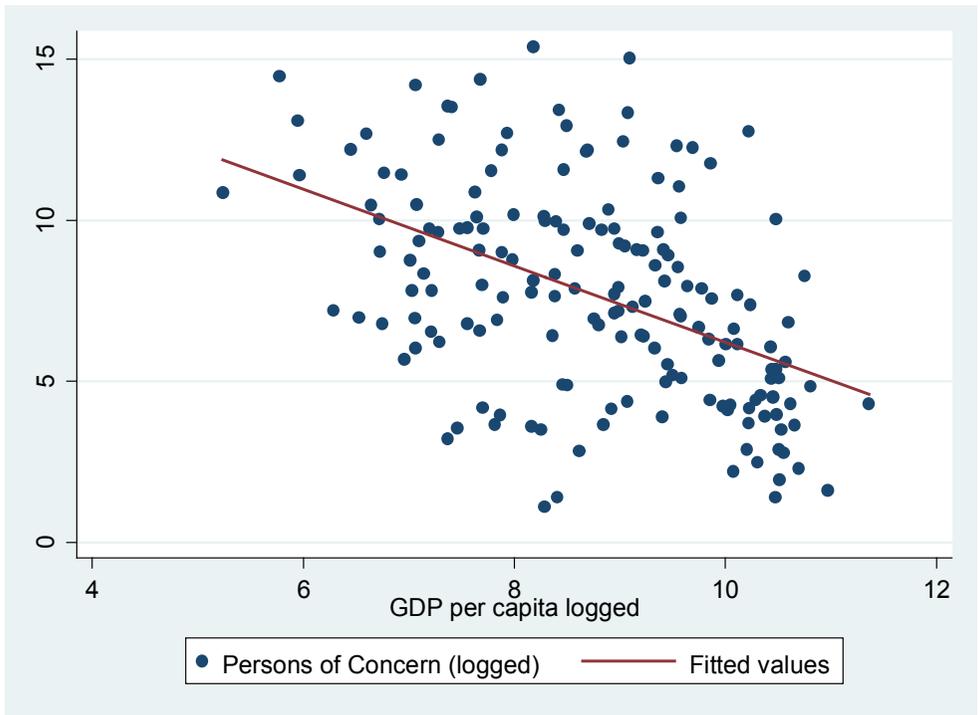
Notes: Statistical significance: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$ + $p < 0.10$ Robust standard errors shown in bracket

Hypothesis Test 1:

H₁: States with lower per capita GDP will have larger populations of concern.

The relationship fails to be statistically significant at the 0.10 level. No correlation can be found between the number of persons of concern and the GDP per capita of the state from which the persons of concern originated. Below is a scatter plot showing the data results. However, no generalizations can be made about the graph or the data because the test fails to find statistical significance in the relationship.

Scatter Plot 1: Persons of Concern and GDP per Capita

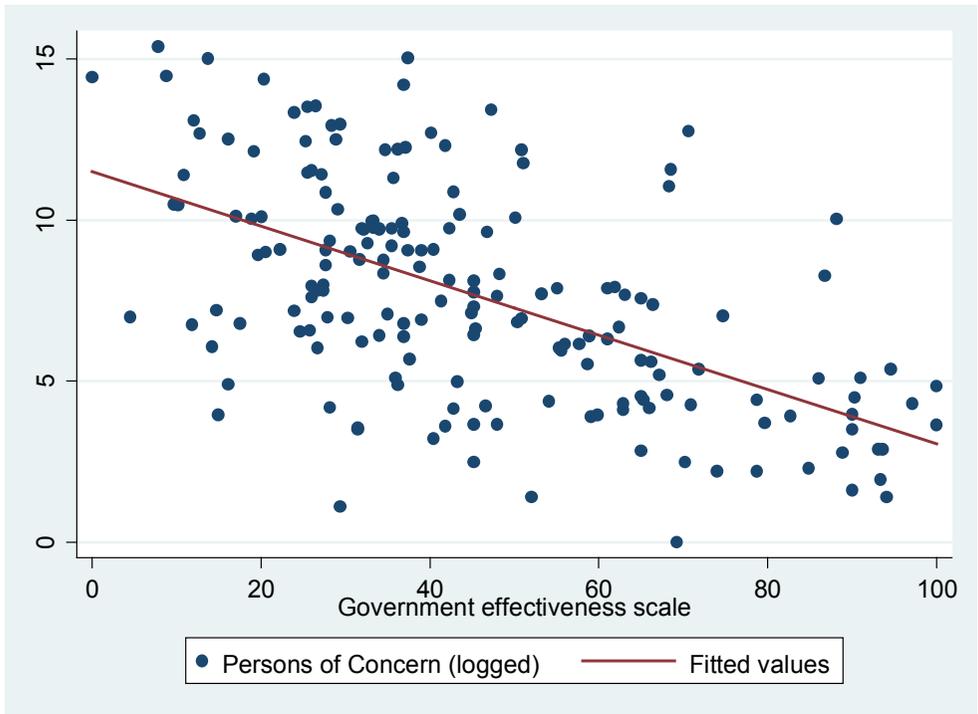


Hypothesis Test 2:

H₂: States with lower government effectiveness ratings will have larger populations of concern.

This relationship is found to be statistically significant at the 0.01 level. There is a correlation between government effectiveness and populations of concern. An increase in one percentage point in government effectiveness rating correlates to an average decrease of 0.057 percent in population of concern, holding all other independent variables in the model constant. This finding is substantively important. For every increase of 10 percentage points in government effectiveness rating, there is a decrease of 0.57 percent in persons of concern originating from the state. This suggests that a more effective government will have smaller populations of refugees and internally displaced persons. Likewise, this means that a higher rating of ineffectiveness for a government correlates to larger numbers of persons of concern. This information could be extremely helpful for policy makers and international development programs. If policies are of a higher quality, and the government is more creditable in their policies, there will be substantially less persons of concern. As such, policies should focus on this phenomenon and work to improve the quality of programs within the public sector of a country.

Scatter Plot 2: UN Persons of Concern and Government Effectiveness Scale

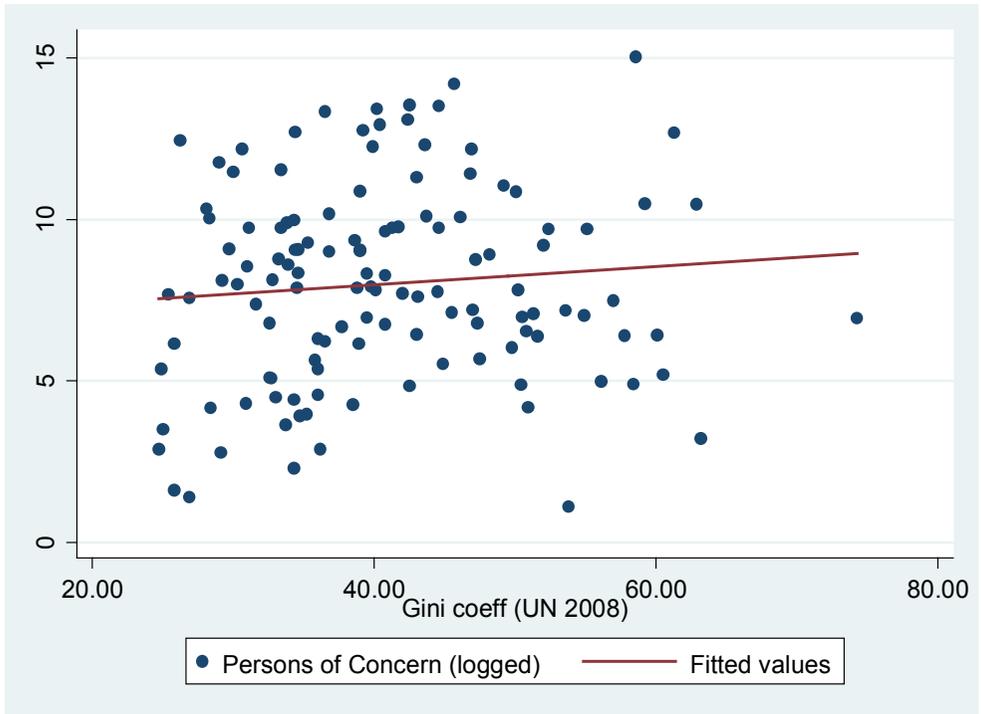


Hypothesis Test 3:

H₃: States with greater income inequality will have larger populations of concern.

There fails to be a statistically significant relationship found at the 0.10 level. Since no statistically significant relationship exists between populations of concern and income inequalities, no generalizations can be made about the data. The scatter plot below details the information between the two variables, but no conclusions can be made based on the graph.

Scatter Plot 3: UN Populations of Concern and Income Inequality (Gini Coefficient)

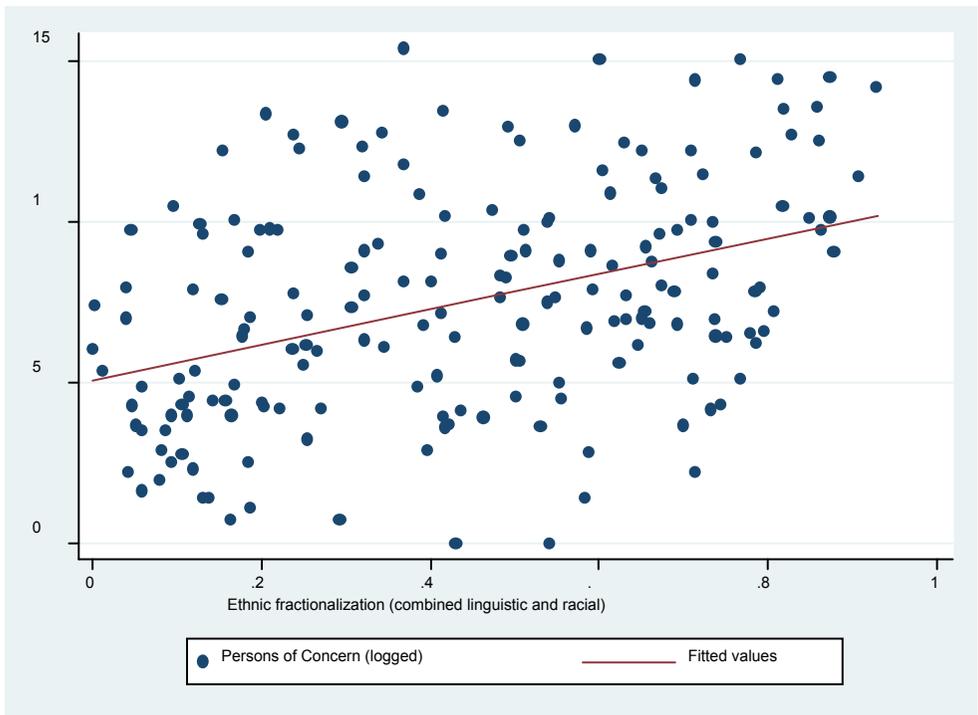


Hypothesis Test 4:

H₄: States with higher ethnic fractionalization will have larger populations of concern.

The hypothesis test finds that there is a statistically significant relationship between persons of concern and ethnic fractionalization at the 0.01 level. A one-point increase in ethnic fractionalization correlates to an average 3.366-percent increase in persons of concern, holding all other independent variables in the model constant. This means that linguistic and racial divisions greatly correlate to increases in persons of concern. This would suggest that policies aiming to minimize ethnic fractionalization would decrease the population of concern. It is ethically questionable to make policies decreasing ethnic fractionalization; instead, policies that decrease ethnic tension and promote peaceful coexistence between ethnic groups should be implemented. By decreasing tensions, increasing cooperation, and integrating the different ethnic factions within a state, the causes creating persons of concern could be minimized, and the population of concern might decrease.

Scatter Plot 4: UN Persons of Concern and Ethnic Fractionalization



Conclusion

Using the ordinary least squares regression model, two of the study's four hypotheses were found to be statistically significant at the 0.01 level. This study found correlations between persons of concern, and ethnic fractionalization and government effectiveness. This would suggest that policies aiming to prevent refugees and internally displaced persons would be more effective if they focused on aspects of government effectiveness and ethnic fractionalization. Ethnic fractionalization will always exist; however, it is possible to make policies that decrease tensions that arise from ethnic fractionalization. The findings of this study suggest that if a government's policies are more effective and increase the quality life for citizens, fewer refugees and internally displaced persons would result.

This study does have some limitations. First, the data used are combined from numerous sources, creating a potential for different recording methods and recording errors while combining the data. Also, the data are contingent on reports by government and international organizations. These reports may create errors through bias reports and errors in recording data. In particular, the UN's population of concern does not capture all internally displaced persons because it is difficult to adequately determine how many internally displaced persons exist within a state that is suffering from internal turmoil. Additionally, the regression model only captures 100 of 191 observations; this makes the findings contingent on a little over half of the observations which may make correlations somewhat biased. There may also be variables missing from the regression model that cause variable bias, which would create Type I errors in the data and cause insignificant findings to appear statistically significant. For this reason more research needs to be done, increasing the variables available to include when running regression models.

This study is one of the few that does not solely focus on specific cases to determine the internal environments that lead to increases in populations of concern. This research found that two themes, ethnic fractionalization and government effectiveness, correlate with UN persons of concern regardless of the particular humanitarian crisis. There are factors that each humanitarian disaster has in common, and more research is needed to better understand these factors. More effective preventative policies can be created by finding the overlapping themes that lead to refugees and internally displaced persons. As the population increases in developing countries, where the majority of refugees and internally displaced persons originate, the more effective preventative policies for persons of concern will be sought by the United Nations. Effective, timely policies are the best way to assure decreases in both refugees and internally displaced persons in the future.

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