Changes in Demographic after Armed Conflict

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Introduction

Since the end of the cold war in 1991, 2016 was the fifth most violent year in the world (Dupuy et al. 2015). Currently in 2017, there are more than 40 active conflicts in the world right now. Armed conflicts severely affect the lives of indivudals in those countries currentl. Most of the data online, outlines the armed conflict and causlaities of the war. Others also include an interactive feature of the global conflict to observe the scale of the conflict, with respect to other nations. One special interactive map illustrates how various armed conflict affect US interests. Despite all the information surrounding the conflict, none acturelty depict how the conflict has affected the lives of the individuals alive and living amidst the war.

War impacts people profoundly, and yet countries like the US insist on engaging in numerous armed conflicts regardless of the outcome. Westernized people, on account of the privelge awarded by not being engaged in the conflcit on a daily basis, rarely undertand the impact of war on the population. How has the war impacted education? Are more males leaving school as a result of the conflict? What about women? How has the war impacted the need to have equal education for women? How has the conflict caused the governmental expenditures to changes? Is there more funding for the various industries or are a mojortiy of the funding being exploited to arm the conflict? In addition, do the citizens have access to water, electircity, and housing and basic human rights?

Our application, seen above, offers a tool to answer the questions as well as a variety of other questions. We intergrated the wealth of infomration available for armed conflict and various findings on coutry-level data to provide a syntehsized view of how armed conflcist affects various nations. By offering this perpective, we can observe that it severely affects countries in which the conflcit takes place and the other side is left unaffected and growing.

Data

The first data set used is from Kaggle titled "Country Socioeconomic Status Scores." This data set includes the overall score of socioeconomic sattus by country for every decade since 1880. Socioeconomic Status (SES) Scores measure the accesibility of an individual, household, or community to collective resources. This measure incoprorates, income, wealth, health, and occupation (Psaki et al. 2014). For each country, this indivudialzied measure is aggregated as a whole to provide the measure for the country.

```
## # A tibble: 5 x 6
##    wbid     country  year   SES gdppc popshare
##   <chr>       <chr> <int> <dbl> <dbl>    <dbl>
## 1   AFG Afghanistan  2010  5.68  1663  0.00415
## 2   AFG Afghanistan  2000  2.06   565  0.00331
## 3   AFG Afghanistan  1990  1.27   604  0.00235
## 4   AFG Afghanistan  1980  3.47   690  0.00306
## 5   AFG Afghanistan  1970  3.47   709  0.00310
```

The second set is world data from the World Bank. The data was accessed from an r package `WDI`. Using the r package we choose 17 indicators which we believed were good measures of the well-being of the individuals in the country. The indicators were as follows:

- health expenditure, total (% of GDP)
- fertility rate, tota (births per total)

- life expectancy at birth, female (years)
- life expectancy at birth, total (years)
- mortality rate, under-5 (per 1000 live births)
- children in employment, total (% of children 7-14)
- labor force, female (% of total labor force)
- labor force participation rate, female (% of female population ages 15+)(modeled ILO estimate) indicator
- GINI index (World Bank estimate) indicator
- Refugee population by country or territory of origin ()
- Refugee population by country or territory of asylum ()
- Improved sanitation facilities (% of population with access) indicator
- Improved water source (% of population with access) indicator
- Access to electricity (% of population) indicator
- Population living in slums (% of urban population) indicator

```
##      country year fetility_rate life_expectancy_female
## 1 Arab World 1960          6.95                   47.9
## 2 Arab World 1961          6.97                   48.5
## 3 Arab World 1962          6.99                   49.1
## 4 Arab World 1963          7.01                   49.7
## 5 Arab World 1964          7.02                   50.3
```

The third and final set is data about armed conflicts from the Uppsala Conflict Data Program (UCDP) at the department of Peace and Conflict Research, Uppsala University and the Centre for the Study of Civil War at the Peace Research Institute Oslo (PRIO). The UCDP/PRIO Armed Conflict Dataset represents both internal and external conflict from 1946 to the present. It documents the two sides in the conflict, as well as the location of the conflict, and indicators of intensity and number of fatalities. Armed conflict is defined as (2002):

> "A contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths in a calendar year" – Gleditsch et al. (2002)

```
## # A tibble: 5 x 4
##                location                 sidea
##                   <chr>                 <chr>
## 1              Bolivia Government of Bolivia
## 2              Bolivia Government of Bolivia
## 3              Bolivia Government of Bolivia
## 4 Cambodia (Kampuchea)  Government of France
## 5 Cambodia (Kampuchea)  Government of France
## # ... with 2 more variables: `side b` <chr>, year <int>
```

Wrangling

Using the three seperate sets, we were able to construct a comprehsnive data set of all necessary information using data wrangling techniques.First we merged the SES scores set, **SES.data**, with the WBD data, **WBD.data2** by merging based on the country first and then the year. Before the merge was successful, the country names had to be reconciled because of subtle differences in naming techniques. For example, "Korea, Dem. People's Rep." in the WBD set had to be renamed to "North Korea" as that was the name in te SES set. We choose to rename the countries based on names we thought the general public would be more familiar with.

```
##       country unid wbid  SES
## 1 Afghanistan    4  AFG 38.0
## 2 Afghanistan    4  AFG 29.6
## 3 Afghanistan    4  AFG 28.1
```

```
## 4 Afghanistan    4  AFG 27.0
## 5 Afghanistan    4  AFG 27.0
```

Next we take the established **WBD.SES** set and merge with the **conflict.data** set based on the "country"/"location." In order to create a tidy data set upon merge, we had to clean-up the conflict set for the "location" variable. For some conflicts in which the conflict occured in different locations globally, we had to seperate the countries in the "location" field and recreate the data for the seperately valued contries. To achieve this we had to create a user-fucnction that replicated the speicified joined countries and duplicated the values in one step. For example, the India vs. Pakistan War of 1965 occured in both India and Pakistan but was represented as "India, Pakistan".

```
## # A tibble: 5 x 4
##          location               sidea               `side b`  year
##             <chr>               <chr>                  <chr> <int>
## 1 India, Pakistan Government of India Government of Pakistan  1948
## 2 India, Pakistan Government of India Government of Pakistan  1964
## 3 India, Pakistan Government of India Government of Pakistan  1965
## 4 India, Pakistan Government of India Government of Pakistan  1971
## 5 India, Pakistan Government of India Government of Pakistan  1984
```

This was instead changed to:

```
## # A tibble: 5 x 4
##   location               sidea               `side b`  year
##      <chr>               <chr>                  <chr> <int>
## 1    India Government of India Government of Pakistan  1948
## 2 Pakistan Government of India Government of Pakistan  1948
## 3    India Government of India Government of Pakistan  1964
## 4 Pakistan Government of India Government of Pakistan  1964
## 5    India Government of India Government of Pakistan  1965
```

In addition, we had to conduct a few name changes to reconcile the differences in set to have a bigger join. The final set which we will be working with is displayed below. The set excludes the regions created in the WBD set for summary purposed such as "Small States" and "Low Middle Income" countries. This set is comprehensive as it includes the SES work for the decade, other country-specific indicators, and information about the conflict for a specific year.

```
##         location year                      sidea
## 1    Afghanistan 1990 Government of Afghanistan
## 2        Albania 1990                       <NA>
## 3        Algeria 1990                       <NA>
## 4 American Samoa 1990                       <NA>
## 5        Andorra 1990                       <NA>
##   labor_force_Particpation_rate   SES
## 1                         16.44  1.27
## 2                         53.15 72.88
## 3                          9.93 56.71
## 4                            NA    NA
## 5                            NA    NA
```

Results

Limitations

issued with the conflict set issues with "Taiwan" and "Hyderabad" in converting

Conclusion

References

Dupuy, Kendra, Scott Gates, Håvard Mokleiv Nygård, Ida Rudolfsen, Siri Aas Rustad, Håvard Strand, and Henrik Urdal. 2015. "Trends in Armed Conflict, 1946–2016." Peach Research Institute OSLO. https://www.prio.org/utility/DownloadFile.ashx?id=1373&type=publicationfile.

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Psaki, Stephanie R, and Jessica C Seidman, Mark Miller, Michael Gottlieb, Zulfiqar A Bhutta, Tahmeed Ahmed, AM Shamsir Ahmed, et al. 2014. "Measuring Socioeconomic Status in Multicountry Studies: Results from the Eight-Country MAL-ED Study." *Population Health Metrics* 12 (1). Springer Nature. doi:10.1186/1478-7954-12-8.