**Analytic Description (NBT World View Index)**

All steps in the analytic process were completed using SAS 9.4. With minor adjustments to the input statement, all code can be run in SAS Studio.

The analytic process described below uses mathematical transformations of existing data to sort and order the countries by score. No inferential statistics were used and the available scores within a particular group were combined using sums. Logarithmic transformations and standardization to z-score were completed to account for the different scales presented by each variable and to ensure that no value was inappropriately weighted outside of the weight distributions designated by the authors.

For this project, we replicated the methodology used by US News and World Report for their global university rankings. After identifying the data and categorizing it into appropriate groupings, we determined the necessary weights of the individual scores for each variable within the different subgroups (Enterprise, Education, Enterprise Support, Foundation, and Research & Translation). Weights were determined through a joint discussion between project leads and the consulting statistician about the data, sources, and project goals. Next, since each variable was on a different scale, we standardized the variables by calculating their z-scores. If the data was highly skewed, a logarithmic transformation of the original variable was used in the z-score calculation. We then applied the previously determined weights to the z-scores. Lastly, we calculated the weighted score for each area by summing the nation’s weighted values for ranking indicators in that area for a total score. Higher scores resulted in higher rankings, with the highest score given a ranking of 1, and subsequent scores falling in after that for all countries with an available score. Given the type of data used and the sensitivity of score calculation to the individual deviations, there were no ties.

Final rankings were compared with and without inclusion of the Compound Score from the US Chamber of Commerce. Additionally, since many countries were missing a large number of variables, the first set of rankings included countries with near complete data, while the second group of rankings excluded the more complete countries and ranked the remaining counties with fewer variable input, while maintaining key variables within the parent subgroups. Multiple imputation and other missing data methodology was not used in this study, due to the knowledge that data missing from a source usually had a reason. If a key variable or too much additional information was missing from an individual country, then that country was not included in the rankings. Rankings only include countries with available data in the focus areas of interest.