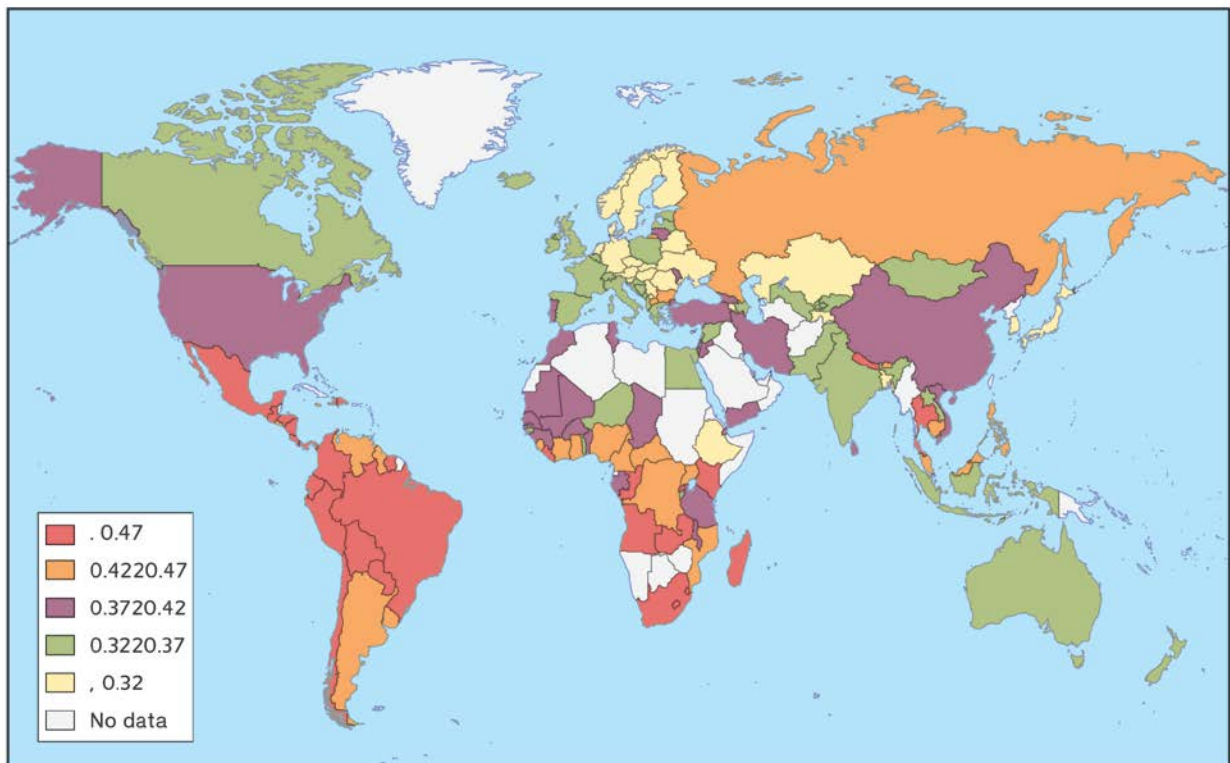Appendix 1: AP Human Geography Topic VI.B.3. Gender Inequality Index

One of the key markers of development is the status of women. More developed societies tend to provide their female population with more rights and opportunities and this is reflected in better health outcomes, equality in the workforce, solid education, reproductive rights, and political representation. The opposite is true for less developed societies although there are some exceptions. In order to provide a better understanding of the status of women, the United Nations created the *Gender Inequality Index*. This combines several variables measuring reproductive health, female empowerment and women's role in the labor market (see module 9G). The Gender Inequality Index is comparable to the more widely used Human Development Index (HDI), but there are some disparities. For example, the United States is ranked fifth on the Human development Index, but only 47th on the Gender Inequality Index mostly because of its higher maternal mortality rate, higher adolescent birth rate, and a lower share of women in Congress. Slovenia ranks first in gender equality, though only 25th on the HDI.

Appendix 2: AP Human Geography Topic VI.B.4. Income Disparity and the Gini Coefficient

Measures like Gross National Income per capita and Purchasing Power Parity account for the relative prosperity of a country, but they are averages and do not account for *income disparities* within a country. All countries have their share of rich people, poor people, and middle class people, but the distributions can be quite different. This is where the *Gini coefficient* is useful. Named for its developer, the Italian statistician Corrado Gini, the Gini Coefficient measures the relative inequality of income among individuals or households within a country. A Gini coefficient of 0 represents complete equality where everybody has the same income. A coefficient of 1.0 represents complete inequality where all the income goes to one person or a tiny group at most. Not surprisingly a country like South Africa, which is not far removed from an apartheid system which denied a majority of its population basic political and economic rights, still has a very high Gini score of 0.63 (based on the most recent UN data).

Scandinavian countries, with their generous social safety nets and relatively homogeneous populations, have Gini coefficients of around 0.25. The United States, with a Gini coefficient in the low 0.40s, lies in the middle of all countries, but has greater income disparities than most developed countries [see map below]. According the Gini coefficient, income disparity in the US has been rising, particularly since 1980.

Appendix 3: AP Human Geography Topic VI.B.5. Changes in Fertility and Mortality

The demographic transition model, discussed in module 3G, demonstrates patterns of population change through declines in the death rate and the birth rate and is also very much related to development. Historically, declines in mortality and especially declines in fertility occurred through economic development. Mortality declined with better public health, a more assured food supply, and medical innovations. Today, many developing countries are deficient in these indicators. While much is known about how to ward off infectious diseases (a much bigger killer in less developed countries) there may not be the hygiene and facilities necessary to act on this knowledge. The recent Ebola epidemic which killed close to a thousand people in Sierra Leone, Liberia and Guinea was made worse by unsanitary conditions and crowding. With increased prosperity, mortality rates would decline.

The decline in fertility rates has an even higher correlation to development. In many less developed countries, fertility rates remain stubbornly high. This results from several factors. First, a high rate of infant mortality makes more births necessary to insure the survival of children. Second, children are a source of economic security as they work or support the family, and can be especially important in a parent's old age. Third, high gender inequality gives women fewer choices other than childbearing and often leads to large families. Finally, there is a relationship between income level in a country and the birth rate. Generally, poorer countries have high birth rates; wealthier countries low birth rates. As countries develop, these factors change as there are fewer reasons for large families and fertility rates decline.