**Development Indicators Research Assignment**

Names \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Resources:** Use the following websites to find the required data for the assignment below.

* + [Statistics – Human Development Reports (UNDP)](http://hdr.undp.org/en/statistics/)
	+ [CIA – The World Factbook](https://www.cia.gov/library/publications/the-world-factbook/index.html)
	+ [Hans Rosling’s GapMinder](http://www.gapminder.org/world/#$majorMode=chart$is;shi=t;ly=2003;lb=f;il=t;fs=11;al=30;stl=t;st=t;nsl=t;se=t$wst;tts=C$ts;sp=5.59290322580644;ti=2013$zpv;v=0$inc_x;mmid=XCOORDS;iid=phAwcNAVuyj1jiMAkmq1iMg;by=ind$inc_y;mmid=YCOORDS;iid=phAwcNAVuyj2tPLxKvvnNPA;by=ind$inc_s;uniValue=8.21;)

**Part 1 – Development Data:**

Using the websites above, locate the following for TWO COUNTRIES, one from the list of countries with “high human development” and one from the list of countries with “low human development”. Use the tables below to fill in the data for the two countries you have chosen.

Social Indicators (find and record figures for both the countries you chose below)

|  |  |  |
| --- | --- | --- |
|  | Highly developed country: | Low developed country: |
| HDI ranking and value |  |  |
| Age structure |  |  |
| Population growth rate |  |  |
| School life expectancy |  |  |
| Life expectancy at birth |  |  |
| Total fertility rate |  |  |
| Education expenditures |  |  |
| GDP per capita |  |  |
| GDP – composition by sector |  |  |
| Unemployment rate |  |  |
| Public debt |  |  |
| Stock of direct foreign investment – at home |  |  |
| Labor force – by occupation |  |  |

**Part 2 – Dependency Ratio:**

A nation’s dependency ratio tells us something about the ability of members of a nation’s workforce to provide necessities to him or herself and his or her dependents. Typically, less economically developed nations will have a higher dependency ratio than more economically developed countries. The lower a nation’s dependency ratio, the greater capacity for its workers to accumulate savings, which leads to investment, accumulation of capital, greater productivity, higher incomes and more economic development.

To calculate a nation’s dependency ratio, you must find demographic information on its population. You may need to do additional research beyond the websites above to find the data.

Calculate the dependency ratios for:

* + - Country with high HDI
		- Country with low HDI

**Part 3 – Lorenz Curve and Gini coefficient:**

The Lorenz curve is a graphical representation of the income distribution of a country. It plots the percentage of a nation’s total income (GDP) against its total population. The “line of absolute equality” is the 45 degree line, indicating a nation where each quintile (20% of the population) earns exactly the same income as each other quintile. No country is absolutely equal; therefore the line of equality is only used for comparison.

The Gini coefficient is the ratio of the area below the line of equality and above a country’s Lorenz curve and the total area of the triangle below the line of equality. A country with perfect income equality would have a Gini coefficient of 0. A country in which the top 1% had controlled all of a nation’s income would have a Gini coefficient of nearly 1.

Example: Australia’s income is distributed across its population in the following way:

* + - 1st 20% – 5.9%
		- 2nd 20% – 12%
		- 3rd 20% – 17.2%
		- 4th 20% – 23.6%
		- 5th 20% – 41.3%
		- Gini coefficient = 0.352

Illustrating your countries’ Lorenz Curves: This is another activity that may require research beyond the websites provided above. Try to find data on the share of national income earned by various levels of society. If you cannot find data for the 20% ranges, use the percentage ranges you can find. Draw Lorenz curves for the two countries you researched.

**Part 4 – Playing with GapMinder:**

Go to Hans Rosling’s site, [GapMinder World](http://www.gapminder.org/world/#$majorMode=chart$is;shi=t;ly=2003;lb=f;il=t;fs=11;al=30;stl=t;st=t;nsl=t;se=t$wst;tts=C$ts;sp=5.59290322580644;ti=2010$zpv;v=0$inc_x;mmid=XCOORDS;iid=phAwcNAVuyj1jiMAkmq1iMg;by=ind$inc_y;mmid=YCOORDS;iid=phAwcNAVuyj2tPLxKvvnNPA;by=ind$inc_s;uniValue=8.21;). Spend some time exploring the indicators available on the horizontal and vertical axes in the graphing software. Be sure to select the three countries you’ve chosen to investigate from the menu on the right so that you can compare a very high, medium and low developed country. Attempt to identify relationships between various social, environmental, health, economic and environmental variables.

Attempt to form THREE HYPOTHESES regarding the relationships between two or more variables and economic development. Does your very high human development country demonstrate any obvious characteristics compared to your medium and low human development countries? When you discover a relationship between various data that you think you can build a hypothesis on, take a screenshot of the graph you have created and paste it onto one document to print and attach to this packet. Explain your three hypotheses below. Here are some questions to get you thinking:

1. Poor people in less developed countries often derive little benefit from economic growth. Why might this be so?
2. Under what circumstances might a country achieve economic growth without economic development?
3. What evidence would indicate to an economist that a country is experiencing economic development as well as economic growth?
4. Consider the view that investment in human capital is the most effective way to provide development.
5. Explain how an increase in the quantity and quality of a nation’s factors of production can promote economic development.
* Hypothesis #1:
* Hypothesis #2:
* Hypothesis #3:

**Part 5 – Conclusions:**

Evaluate your findings from the two countries you researched.

* + What conclusions can you draw about the correlation between GDP, HDI, income equality, social and economic indicators between developed and developing countries?
	+ Does a high HDI correlate with relative income equality? What about low HDI?
	+ Is a high GDP indicative of high levels of human development?
	+ What other conclusions can you draw about economic development, national income, and equality?
	+ To what extent did your country with low HD exhibit the following characteristics?
		- Low standards of living?
		- Low incomes?
		- Inequality?
		- Poor health?
		- Inadequate education?
		- Low levels of productivity?
		- High rates of population growth and dependency burdens?
		- High levels of unemployment?
		- Dependence on agricultural production and primary product exports?
		- Imperfect markets?
		- Dependency on foreign developed countries for trade, access to technology, foreign investment and aid?