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## Homework Project

This assignment will be due by **5pm** on **Wednesday, December 1st**. You can turn in your assignment in lecture or put it in my mailbox in the economics department. Be certain to read each question carefully to determine what you are required to produce to answer the question. Regardless of what you are required to produce, it is important that you carefully cite any and all sources that you use. Citations should follow either an established style guide (APA, Chicago Manual of Style) or the suggested citation given by the source. If you need to make any assumptions or manipulate data in any way (for example, converting nominal GDP to real GDP), provide a brief description of what you have done and why it was necessary. When asked to produce graphs, you must produce the graphs yourself from raw data (you cannot copy and paste a graph produced by someone else). Be certain to clearly label any graphs or tables.

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### 1. The Great Depression and the Recent Recession

Construct three pairs of graphs that compare the severity of our recent recession to the severity of the Great Depression. Each graph should have time on the horizontal axis and the variable of interest measured on the vertical axis. For all of the graphs, you should use comparable time spans if possible. For example, if a graph for the Great Depression begins one year before the start of the Depression, the corresponding graph for the recent recession should begin one year before the start of the recession. The end dates should also be comparable if possible (if you cannot provide comparable timespans, please include a short explanation of why you could not). Details on the three different pairs of graphs are given below:

- (a) The first set of graphs should show a measure of gross domestic product over the course of the Great Depression on one graph and gross domestic product over the course of the current recession on the other graph. Be certain to measure GDP in units that allow for meaningful comparisons between the two graphs.
- (b) The second set of graphs should follow the same format but use the unemployment rate rather than GDP. When choosing unemployment data, keep in mind that there are several different measures of unemployment used today. You should choose the measure that is most comparable to the way your unemployment rates for the Great Depression were calculated.
- (c) The final set of graphs should follow the same format but use a stock market index rather than GDP. As with the GDP graph, carefully consider whether any normalizations of the data are required to make meaningful comparisons between the Great Depression and the recent recession.

## 2. Standard of Living Then and Now

The purpose of this question is to get a better sense of just how much the standard of living has risen over time by examining how historical GDP per capita levels compare to modern incomes.

Construct a graph that has year on the horizontal axis (from 1790 to 2000) and percentile of the current income distribution for the United States on the vertical axis. For each decade on the horizontal axis, you should find out what the GDP per capita was and determine what percentile of the modern income distribution that GDP per capita would correspond to.

For example, suppose GDP per capita (in 2008 dollars) was \$32,000 in 1910. An annual income of \$32,000 would put an individual in the 35th percentile of the United States' income distribution. So one point on your graph would be at (1910, 35). You should plot at least one point per decade.

Be very careful to compare incomes in the appropriate units. For instance, if you are using the distribution of income in 2008, your historical GDP per capita values may need to be converted into 2008 dollars. Note that even if your historical GDP values are in real terms, you may still need to convert them to a different base year.

## 3. The Debate Over Financial Regulation

Just as the recent troubles of the banking sector have sparked debate about the role of the federal government in regulating financial markets, earlier banking panics also led Congress to rethink the structure of the banking sector. One such event, the Panic of 1907, led to financial reform in the form of the Aldrich-Vreeland Act. As with modern reform, this act had both its supporters and its detractors.

Find two excerpts (they could be from speeches, debate transcripts, editorials, congressional records, etc.) that represent the two sides of the debate over financial regulation after the Panic of 1907. One excerpt should be in support of greater financial regulation. The other excerpt should be in opposition to greater regulation (or at least to the specific regulations being proposed in Congress). These excerpts must be from sources written at the time of the debate, not from later historical accounts. Each excerpt should be roughly 100 to 300 words in length.

#### 4. Placing the Evolution of Human Capital in Perspective

In the first week of classes, we looked at the growth in the GDP per capita of the United States over time and examined how long it took the United States to surpass the modern day GDP per capita of various countries. The purpose of this question is to do a similar exercise focusing on growth in human capital rather than income.

- (a) Construct a graph that looks at human capital over time in the United States. The variable you choose to focus on is up to you but must capture some dimension of the human capital stock of the population (essentially how educated or skilled the population is). An example would be the percentage of people that have graduated from high school (a larger percentage of high school graduates would indicate a greater human capital stock). Whatever variable you choose, your graph must cover at least the period between 1870 and 2000.
- (b) Construct a table comparing the historical values of your human capital variable for the United States to modern values for other countries. Your table should follow the format of the GDP per capita table on Slide 3 of the 09-29-10 lecture slides. The table from the lecture slides is reproduced on the next page for your reference.

The table should show a list of countries ordered by their current level of your human capital variable (instead of the GDP per capita variable used in the table from lecture). The first column should give the country's rank relative to all countries in terms of the human capital variable. The second column should give the country's name. The third column should show the country's actual level of the human capital variable. You should insert the historical values you found for the United States into this table just as the table in the lecture slide did for the historical US GDP per capita levels. Include six different historical values for United States covering the period 1875 to 2000 in 25 year intervals (1875, 1900, 1925, 1950, 1975 and 2000 or the years in your data that most close match these years). You do not need to include every country in your table, just the countries on either side of each historical US value.

Be certain to do any necessary transformations to the data to make the US data comparable to the international data. For example, it is not useful to compare the total number of college graduates in the United States to the total number of college graduates in Switzerland given the large differences in population size. You would need to determine some reasonable way to control for population size.

Rank	Country	GDP per capita (2010 US dollars)
180	Democratic Republic of Congo	171
179	Liberia	239
178	Sierra Leone	311
145	Kenya	912
	<b>United States, 1710</b>	<b>952</b>
144	Nicaragua	972
118	Indonesia	2,329
	<b>United States, 1840</b>	<b>2,336</b>
117	Paraguay	2,337
84	Namibia	4,543
	<b>United States, 1880</b>	<b>4,585</b>
83	Azerbaijan	4,807
52	St. Kitts and Nevis	10,315
	<b>United States, 1929</b>	<b>10,640</b>
51	Lithuania	11,172
37	Oman	18,013
	<b>United States, 1945</b>	<b>18,079</b>
36	Czech Republic	18,557
10	Austria	45,989
<b>9</b>	<b>United States</b>	<b>46,381</b>
8	United Arab Emirates	46,857
7	Netherlands	48,223
6	Ireland	51,356
5	Denmark	56,115
4	Switzerland	67,560
3	Qatar	68,872
2	Norway	79,085
1	Luxembourg	104,512

International Monetary Fund, World Economic Outlook Database, April 2010