In the name of God
Sharif University of Technology
Department of Economics
Macroeconomics 1 - Spring 2018
Problem Set 1
(Due: 1396/11/23 Monday, before TA class.)

1 Readings

- Read and summarize in a page: "Friedman, 1966, The Methodology of Positive Economics"
- Read and summarize in a page: "Uhlig, Harald, 2010, Economics and Reality"
- Read and summarize in a paragraph: "Steindel, 1995, Chain-weighting GDP"

2 GDP Calculations

Consider the following economy

<table>
<thead>
<tr>
<th>Year</th>
<th>Agricultural Production</th>
<th>Industry Production</th>
<th>Services Production</th>
<th>Agricultural Prices</th>
<th>Industry Prices</th>
<th>Services Prices</th>
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<td>1396</td>
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<td>15</td>
<td>70</td>
<td>110</td>
<td>140</td>
<td>110</td>
</tr>
</tbody>
</table>

1. Calculate the real GDP for each year using the method of "Constant Prices".

2. Calculate the real GDP for each year using the method of "Chained".

3. Calculate the Price Index for each year using three different methods.
3 Real World

Go to the world bank data bank (http://data.worldbank.org/) and find the real GDP data of the countries of the world (available there).

1. Using MATLAB or STATA, calculate the real GDP growth rates of these countries for 1965-2005 (If not available, use the latest available data but mention these limitations).
   Plot them sorted.

2. Plot the histogram of these growth rates. What can you say about it?

3. Plot the scatter plot of these growth rates versus their real GDP in 1965. What can you say about it?

4. Redo the previous part only for the OECD countries.

5. Redo the previous part only for the African countries.