Econ 2020 Homework 3

Instructions:

Homework assignments are optional – there is no penalty for not completing an assignment.

If you like, you can work with other students in the class. Just turn in one assignment per group and include all names (assuming you have the same TA).

Each student can earn up to 2 points per homework. The points will be added to the highest of the first two exam scores.

You can turn in the work at the beginning of class or send the homework to your TA by email.

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The deadline to submit your work is Tuesday, February 21st.

If you have any questions, please ask at the beginning of class.

In the supply side growth model, savings can be applied one of four ways:

1. Replace depreciated capital.
2. Upgrade the existing capital stock for technological improvements.
3. Equip new workers with their share of capital.
4. Increase the capital to labor ratio.

I. Table 1

For each of the 4 above, fill in the table that shows if:

- The existing **capital stock**:
  - remains constant,
  - increases or
  - decreases.
• The capital labor \((K/L)\) ratio:
  o remains constant,
  o increases or
  o decreases.

• Worker productivity:
  o remains constant,
  o increases or
  o decreases.

• Holding the labor force constant, supply side growth will:
  o remain constant or
  o be a positive number.

<table>
<thead>
<tr>
<th>Savings can be applied four ways for investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace depreciated capital</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>The existing capital stock will:</td>
</tr>
<tr>
<td>The capital-labor ratio will:</td>
</tr>
<tr>
<td>Worker productivity will:</td>
</tr>
<tr>
<td>Holding the labor force constant supply side growth will:</td>
</tr>
</tbody>
</table>

II. Table 2

Fill in each cell with either:
- **Remain constant,**
- **Increase or be a positive number, or**
- **Decrease**

<table>
<thead>
<tr>
<th></th>
<th>For a Steady State Country</th>
<th>For a High Savings LDC</th>
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</thead>
<tbody>
<tr>
<td>The existing capital stock will:</td>
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**III.** What is the key difference in long run supply side growth between a Steady state country and a High savings LDC?