LRAS (Long-run aggregate supply curve)

**Long-Run:** All prices are fully flexible and change in some proportion.

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**Labor Market**

\[ W = \frac{W}{P} \]

<table>
<thead>
<tr>
<th>W</th>
<th>P</th>
<th>( W = \frac{W}{P} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>270</td>
<td>90</td>
<td>3</td>
</tr>
<tr>
<td>300</td>
<td>100</td>
<td>3</td>
</tr>
<tr>
<td>330</td>
<td>110</td>
<td>3</td>
</tr>
<tr>
<td>360</td>
<td>120</td>
<td>3</td>
</tr>
<tr>
<td>390</td>
<td>130</td>
<td>3</td>
</tr>
<tr>
<td>420</td>
<td>140</td>
<td>3</td>
</tr>
</tbody>
</table>

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**Production Function**

\[ Y = F(L; K, t) \]

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An important note:

"Over the business cycle, RGDP fluctuates around potential GDP (\( Y_p \)) because the quantity of labor employed (L) fluctuates around its full employment level (L_f). The aggregate supply-aggregate demand model (AS-AD model) explains these fluctuations."  (Bade-Parkin, P32, Chap. 13).
SAS or AS (short-run aggregate supply curve) are sticky.

Short-run: Many prices, especially \( W \) (money wage) at some predetermined level.

\[ \text{Labor Market} \]

\[ \begin{align*}
L_1 & : w_1 = 3.0 \\
L_2 & : w_2 = 3.3 \\
L_3 & : w_3 = 2.75 \\
\end{align*} \]

\[ \text{production function} \]

\[ Y_1 = 13 \]

Assume that \( \bar{w} = 330 \). We obtain:
1. \( P_1 = 110, \ w_1 = \frac{\bar{w}}{P_1} = \frac{330}{110} = 3 \)
2. \( P_2 = 100, \ w_2 = \frac{\bar{w}}{P_2} = \frac{330}{100} = 3.3 \)
3. \( P_3 = 120, \ w_3 = \frac{\bar{w}}{P_3} = \frac{330}{120} = 2.75 \)

\[ \text{Short-run aggregate supply curve} \]

\[ \text{Aggregate Supply curve (AS)} \]

\[ \text{LRAS} \]