**Disequilibrium Macroeconomics: Quantity Adjustment Models**

It is obvious that if prices and wages are not flexible enough to clear markets instantaneously, then variations in output and employment quantities will bear that brunt of adjustment to disturbances (whether of internal or external origin).

**Wage and price rigidity:** two rationales:

(1) Sociological or political factors: "jealousy" in a decentralized economy results in downward inflexibility of nominal wage. A general decline is implausible because each party fears that as his nominal wage declines, others’ might not, resulting in a decline in his relative income in real terms. So it is like a game of prisoner’s dilemma.

(2) Aversion to uncertainty and preference for security: widespread existence of explicit as well as implicit contracts on wages and prices.

Wages $\rightarrow$ unions, collective bargaining, learning by doing (quality of labour)

Prices $\rightarrow$ transaction costs of changing prices

$\rightarrow$ *market share considerations: goodwill and reputations, particularly relevant in oligopoly with no collusion.

**Fixed-Price Models: A first approximation**

Assumptions:

(1) Suppose the “auctioneer” did it wrongly and prices and wages are at disequilibrium levels (non-market clearing levels) but they cannot be changed.

(2) Recall the dual-decision hypothesis (i.e. the buying and selling decisions are separate in a monetary economy, unlike the situations in a barter economy). Assume two sectors:
households and firms. They form expectations on the basis of the disequilibrium wages and prices and the implied consequences.

The system can then be locked into a state of prolonged/permanent disequilibrium.

**Three basic regimes** (Artis, p.219)

- **KU** – Keynesian unemployment
- **CU** – Classical unemployment
- **RI** – Repressed inflation

$P(W^*)$ – equilibrium real wage (clearing the labour market)

$Y^*$ – output

Point A is the “bliss” point: both the labour and the goods markets clear. It is a Walrasian equilibrium. All the other regions are disequilibrium regimes.

**KU** – caused by autonomous decline in demand

**CU** – caused by too high a real wage level $\left(\frac{W}{P}\right)$
RI – caused by too low a real wage level \( \frac{W}{P} \)

1. **KU** – an exogenous decline of demand may be rationalized using the dual-decision hypothesis:

   (1) Households: feel constrained in the labour market \( \bar{L} < L^s \) and hence reduce demand \( Y^d < Y^* \).
   
   (2) Firms: feel constrained in the goods market \( Y^d < Y^* \) and hence reduce demand for labour \( L^d < L^s \).

Mutually reinforcing and the economy would be locked into a state of under-employment. So it is just like of case of "self-fulfilling prophecy".

Because of unemployment, \( \frac{W}{P} > MPPL \), but \( \frac{W}{P} < \frac{W^*}{P} \) a point we will elaborate later.

2. **CU** – caused by \( \frac{W}{P} > \frac{W^*}{P} \)

   In that case \( Y^d > Y \) (Y, not \( Y^* \)) because households, having a great amount of purchasing powers, look for more goods, but firms do not find it profitable to produce those goods to satisfy households’ demand.

   Hence CU exists whether actual \( Y > Y^* \).

3. **RI** caused by \( \frac{W}{P} < \frac{W^*}{P} \) and \( Y^d > Y^* \).

   There is excess aggregate demand but \( \frac{W}{P} \) is depressed (by
various factors such as government intervention in a socialist economy). Wage inflation is artificially held down. Hence the name "repressed inflation".

**Diagrammatic summary**  (Levacic and Rebmann, *Macroeconomics: An Introduction to Keynesian-Neoclassical Controversies*)

**Figure 1  Walrasian general equilibrium**

**Figure 2  The labour market: classical unemployment**
Figure 3  The labour market: repressed inflation

Figure 4  The labour market: Keynesian unemployment
Table 1 General Classification of Excess S/D and Rationing

<table>
<thead>
<tr>
<th></th>
<th>Households</th>
<th>Firms</th>
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</thead>
<tbody>
<tr>
<td><strong>Rationed sellers</strong></td>
<td><strong>Excess supply</strong> in the labour market</td>
<td><strong>Excess supply</strong> in the goods market</td>
</tr>
<tr>
<td><strong>Rationed buyers</strong></td>
<td><strong>Excess demand</strong> in the goods market</td>
<td><strong>Excess demand</strong> in the labour market</td>
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</tbody>
</table>

\(w\): real wage  
MPL: marginal product of labour  
MVL: marginal value of leisure (non-labour)

Table 2 A taxonomy of non-market-clearing states

<table>
<thead>
<tr>
<th><strong>Excess supply</strong> in labour market</th>
<th><strong>Excess demand</strong> in goods market</th>
<th>Keynesian unemployment</th>
<th>Classical unemployment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households rationed in labour market.</td>
<td>Households rationed in goods market.</td>
<td>((w &lt; \text{MPL}))</td>
<td>((w = \text{MPL}))</td>
</tr>
<tr>
<td>Firms rationed in goods market.</td>
<td>Firms rationed in goods market.</td>
<td>((w &gt; \text{MVL}))</td>
<td>((w &gt; \text{MVL}))</td>
</tr>
<tr>
<td>Unlikely</td>
<td></td>
<td></td>
<td>Repressed inflation</td>
</tr>
<tr>
<td>Households rationed in goods market.</td>
<td>Firms rationed in labour market.</td>
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