Chapter 43: Keynesian vs. monetarist/new classical view of LRAS (2.2)

### Key concepts
- Keynesian model of AS
- Monetarist/new classical model of LRAS

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<th>Alternative views of aggregate supply</th>
<th>Explain, using a diagram, that the monetarist/new classical model of the long run aggregate supply curve (LRAS) is vertical at the level of potential output, (full employment output), because aggregate supply in the long run is independent of the price level</th>
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<td>Explain, using a diagram, that the Keynesian model of the aggregate supply curve has three sections, because of wage-price downward inflexibility and different levels of spare capacity in the economy</td>
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I live in an “Expatriate Bubble” in south Jakarta Indonesia at about 50 meters above sea level – with the shore line some 40 kms away. If one were to take all the books written about John Maynard Keynes and dump them into the sea, I’d have beach-front property and Al Gore would be howling “I told you so!” However, books on Keynes are of high marginal social benefit, so book-dumping would be a major loss.¹

In any case, *macroeconomics* – as a specific field of economics – was basically invented by Keynes (see *Celebrity Bubble* following) during the 1920s and ‘30s. In order to understand the ‘competing’ schools of thought on the subject of demand-side or supply-side, it is necessary to briefly look at the historical background of macroeconomics and trace the strong theoretical and ideological differences which come to a point in the dispute over the shape of the long run aggregate supply curve.

- **Keynesian model of AS**

  Conventional economic wisdom in the pre-Keynesian era held that both goods and labour markets ultimately clear and that market forces would ultimately do away with any excess supply or demand. Economic analysis in the late 19ᵗʰ and early 20ᵗʰ century, the **new classical school**, was primarily *microeconomic*, where the focus was on individual markets and the market clearing functions of supply and demand. This line of thinking was equally applied to labour markets; labour was no different than any other commodity and as long as the labour market was kept free from interventionist forces (more on this in Section 3.4) there would be full employment. One could say that the new classical school sees no

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¹ Don’t worry, I’m waiting for global warming and melting ice caps to take care of things nicely. Here at the Shady Oaks Retirement Home I will be fishing for marlin from my balcony.
discernible difference between the market for chickens and the market for chicken-pluckers. In other words, the labour market would always tend towards equilibrium in the long run.

The Great Depression of the 1930s and prolonged mass unemployment was viewed by new classical theory as the result of market interventionist and anti-competitive forces such as trade-unions which kept wages above market clearing levels. As long as wage rates responded to market forces and were flexible the labour force would adapt to wage changes. According to the predominant view, unemployment was ‘voluntary’ to the extent that labourers were not willing to accept jobs at the going wage rate.

This view came under scrutiny and subsequent challenge during the 1930s, especially when unemployment rates hit hitherto unseen levels – over 15% in Great Britain and 25% in the US – in the early 1930s and remained high. Two simultaneous – and largely unrelated – schools of thought developed; one in Sweden and one in England. The Swedish School, later known as the ‘Stockholm School’ evolved primarily from the work of Gunnar Myrdal and Bertil Ohlin (later a Nobel laureate) while in England it was Keynes who was the prime instigator.\(^2\) The basic position taken in this new line of theory was that the drawn-out depression where high unemployment and stagnant (or falling) output levels existed for such long periods could neither be explained nor solved by the predominant theory of the day.

\(^2\)Makroekonomi – teori, politik och institutioner, Klas Fregert & Lars Jonung, Studentlitteratur 2003, pages 105 – 120 (The authors point out that the Swedes’ very similar theory predated Keynes by a few years and posit that had Myrdal, Ohlin and others not written in Swedish we could very well have been talking about Stockholmian theory rather than Keynesian theory today.)
John Maynard Keynes (rhythms with ‘rains’ and Keynesian rhythms with ‘rains-ian’ – whatever else you might hear) was in all probability one of the most brilliant and gifted people ever to walk the face of the earth. Luckily, he also became one of the most influential. What else can you say about someone who basically “slipped” into economics and thereby created a new science? Who, according to legend, made his fortune by reading the morning paper in bed every morning and then placing a call to his stockbroker? Who had a heavy hand in creating several of the most influential international agreements in the post WWII period? Who... I give up. It is impossible to fit the gigantic figure of Mr Keynes into a few hundred words. Here are a few basic biographical notes topped off by five books well worth reading.

Victorian in upbringing and Old School to the hilt, Keynes displayed brilliance from the first. At 14 he won a scholarship to Eton and went on to King’s College at Cambridge. There he studied mathematics but was begged by the famous Alfred Marshall to become an economist. Instead, he went to India for two years as a civil servant, after passing the civil service examination with the second highest marks – his lowest marks being in economics! Evidently knew more about Economy than my examiner.$

Having accomplished little in India other than getting a pedigreed bull sent to Bombay, as he later remarked, he returned to Cambridge where he taught and also ran the prestigious *Economic Journal*. He became a part of the group of artists and intellectuals known as the Bloomsbury Group; including Leonard and Virginia Woolf, E. M. Forster, and Lytton Strachey with whom he had one or several homosexual affairs.

He speculated in shares and bonds, making the considerable fortune of some £500,000 in current values. He ran the Cambridge theatre and managed the restaurant – plotting food receipts against what was currently playing to see which plays could be linked to increased demand for food. He married a famous Russian ballerina, Lydia Lopokov. In between all this he reshaped the world.

**CELEBRITY BUBBLE:**

**JOHN MAYNARD KEYNES (1883 – 1946)**

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**Type 4 Smaller heading** Keynesian critique of new classical thinking

“The real difficulty in changing any enterprise lies not in developing new ideas, but in escaping from the old ones”. The origins of Keynesian theory are squarely rooted in the seeming failures of depression-era economic thinking which did not seem to be able to deal with stagnant growth and high unemployment. Here are the main points of Keynes’s criticism of the new classical view:

- Markets are inherently (= essentially) unstable and do not necessarily clear. It is quite possible for labour markets to render high levels of unemployment even in the long run. Keynes harshly criticised new classical thinking for fallacy of composition; simply because individual markets might clear does not mean that this holds true for the aggregate. Lowering wages might well increase the demand for – and amount of – labourers in one industry but not in *all* industries.
- Wages are ‘downward sticky’, i.e. labourers/unions are most unwilling to accept cuts in wage rates. This adds to labour market disequilibrium by keeping wages above market clearing level. Real wages simply do not fall enough to completely clear the market and restore full employment. (Revise “minimum price” in Section 2.1.)
• Since labour markets are imperfect, non-interventionist policies do not help unemployment and in fact may serve to keep unemployment rates high over long periods of time.

The strength in Keynes’s work lay in his predisposition for hands-on applicability. While his work was heavily based in mathematics – he was, in fact, a mathematician by education – he was clearly focused on practical solutions. The logical conclusion to the criticism of prevailing new classical thought was that there is merit in government intervention to help create market equilibrium. Fiscal policies such as increased government spending can help achieve full employment by increasing aggregate demand. According to traditional Keynesian theory, disequilibrium on the labour market is primarily due to lack of demand for labour – this is demand deficient unemployment – and can be remedied by increasing aggregate demand and therefore increasing the demand for labour. (Remember ‘derived demand’?!) While ‘pre-Keynesian’ thought accepted Say’s Law of ‘…supply creating its own demand…’\(^3\), meaning that there could never be a permanent glut in supply (and thus deficiency in demand), Keynes vehemently disagreed and one might well imagine him reversing the order; ‘…demand creates its own supply…’.

(Type 3 Medium heading) The Keynesian aggregate supply curve – ‘In the long run we are dead’

I bet the caption caught your eye. You will understand it in a moment. Figure 3.3.3 shows the Keynesian aggregate supply curves which ranges from a horizontal portion, a “trade-off” portion and a vertical portion. (Note that the Y-axis reads ‘Price level’ rather than ‘GDP deflator’, which will be the case in all diagrams when referring to ‘\(P_0, P_1\)’ rather than actual index values.)

The ‘traditional Keynesian’ aggregate supply curve, AS, shows three possible ranges of output:

• **Horizontal portion:** The depression range of mass unemployment (up to \(Y_0\)) follows the course of the previous aggregate supply curve, where output increases without an increase in the price level. The horizontal portion of the ‘inverted-L’ shaped curve shows that income can increase to \(Y_0\) without a rise in the price level. This is based on:
  
  o Keynes’s premise of downward stickiness of labour. Since labourers/unions are unwilling to accept lower wages (this is the ‘downward stickiness of labour prices’ part\(^4\)) during a period of demand deficiency and resulting unemployment, a situation of high unemployment may persist in the long run.

  o Due to the abundance – excess supply – of labour and other factors at low income levels, labourers will be highly reluctant to bid up wages even as output increases. Imagine that output increases from any output level up to \(Y_1\) with the ensuing increase in demand for labour. Both newly hired and existing workers would not be in a position to bid up wages since there are thousands waiting in line for their jobs. Thus it is possible to increase output without creating upward pressure on wages and final prices, resulting in a horizontal aggregate supply curve.

• **Trade-off portion:** At \(Y_0\) the economy is moving closer to the full employment level of output and firms are responding to higher final prices for their goods and services. This middle range portrays the correlation between a higher price level and increasing real output (explained earlier) leading the aggregate supply curve to be upward-sloping. This range, \(Y_0\) to \(Y_{FE}\), illustrates two important points.

  o The first is that aggregate supply will increase only when firms are able to enjoy higher final prices for their output and thus cover additional costs arising from bottlenecks in

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\(^3\) Jean-Baptiste Say, famous French laissez faire advocate and new classical economist, (1776-1832)

\(^4\) I often explain ‘downward sticky’ by referring to good and bad wines. It’s easy to get used to good wines – and most difficult to move back down on the quality list once one is used to the good stuff. Acquired taste is thus ‘downward sticky’.
This portion highlights one of the most important policy debates in economics; the apparent trade-off between unemployment and inflation. Recall that one of the key conclusions of Keynesian theory is that markets are imperfect and thus government intervention is necessary in order to create labour market clearing and thus full employment. The middle-range of the aggregate supply curve indicates that governments will face a macroeconomic opportunity cost issue; increased government spending (which stimulates AD) might result in lower unemployment at the cost of a higher price level, i.e. inflation. This trade-off between inflation and unemployment is a central subject of Chapter 54, the Phillips curve.

- **Vertical portion:** The vertical range of AS at $Y_{FE}$ and beyond is the same as the physical limit illustrated earlier (Figure 3.3.2 SRAS) where firms simply cannot increase output whatever the incentives of final prices. The complete price inelasticity of supply beyond point $Y_{FE}$ illustrates the effect of ever-more scarce factors of production and thus increasing output constraints. This is the full employment level of output, $Y_{FE}$. Firms will not be able to hire additional labour and no increase in output is possible; the aggregate supply curve is vertical. Any increase in aggregate demand will be purely inflationary.

Figure: 3.3.3 Keynesian aggregate supply

Depression and mass unemployment at low levels of income. As labour will have difficulties in bidding up wages and firms will have excess (unused) capacity, costs in firms do not rise when output increases.

Beyond $Y_{FE}$ firms are unable to increase output no matter what the price level is – the AS curve becomes vertical.

When the economy nears the full employment level of output, $Y_{FE}$, higher costs will induce firms to raise prices – the AS curve slopes upwards. (For full explanation, see the Phillips Curve, Section 3.5.)

(Type 4 Smaller heading) SR and LR

We finish where we began, where we all die. Have you noticed an inconsistency between the current
syllabus heading and the curves in Figure 3.3.3 - Keynesian aggregate supply above? Have a quick look and ponder before you read on. Did you see it? The heading reads ‘long run aggregate supply’ but the curve in the diagram is labelled ‘aggregate supply’. This is completely in line with Keynesian reasoning on aggregate output, where it may take years, or even decades for labour markets to clear, during which the economy can remain at an equilibrium below full employment – since there is nothing inherent in the economic system to move the economy out of depression.

The Keynesian prescription of increased government spending during recession/depression to stimulate the economy (‘priming the pump’ as it was known during Keynes’s time) serves to increase output and rectify disequilibrium on the labour market. In taking care of the short run, the long run will take care of itself, so to speak. So, while it might be possible in the long run for real wages to fall enough to create full employment without government intervention …in the long run we are all dead.

FOR THE RECORD; AGGREGATE SUPPLY ACCORDING TO ‘KEYNESIANS’ AND KEYNES

There is no end of confusion as to what Keynes actually did or did not say. Much of what is considered to be ‘traditional Keynesianism’ was in fact the result of followers of Keynes rather than the master’s own work. Part of the confusion apparently arises from the fact that Keynes was by training a mathematician rather than an economist, leading him to use mathematical formulae for his illustrations, rather than diagrams (against the express recommendations of his famous teacher, Alfred Marshall, to whom Keynes lovingly referred as “an absurd old man”). Most of the diagrammatical work was done by others, primarily the economists (and Nobel laureates) Paul Samuelson and Sir John Hicks. In any case, while Keynesian theory has commonly utilised diagram B following, it is in fact highly likely that Keynes himself accepted the standard new classical theory of an upward-sloping aggregate supply curve (diagram C) given his assumption of constant nominal wage rates making it possible for firms to increase output when final prices of goods increase since real wage rates will have effectively fallen.
Monetarist/new classical model of LRAS

The Keynesian view of aggregate supply dominated economic thinking and policies throughout the 1950’s and ‘60’s, whereupon a counterview arose which took as its base the new classical premise of perfectly functioning markets. This was the monetarist school of thought initially put forward by Milton Friedman (see Celebrity Bubble following) which would also spawn a number of similar schools of thought, primarily the new-classical and supply-side schools (see ‘A little depth…’ below). The monetarist line of reasoning took issue with a number of key Keynesian assumptions:

(Type 4 Smaller heading) Monetarist criticism of Keynesian AS

1. The starting point for the monetarist school was that ‘People are not fooled by having more money’. In other words, as income increases when moving along the short run aggregate supply curve people would realise that the higher price level would hollow out their – unchanged – wages. Labourers in the monetarist/new classical view thus do not suffer from ‘money illusion’ but are well aware of the negative effects of a higher price level on real wages.

2. This view (“new-classical” from now on) therefore strongly disagreed with the Keynesian assumption that wage rates would remain unchanged in the long run. Wages are market-based and therefore highly flexible - workers’ inflationary expectations (see Section 3.5) would force them to use their bargaining power to bid up wages when the price level increased in order to retain their purchasing power.

3. Since higher wages ‘eat up the distance’ between the final price firms get for their goods and the costs of producing them, the short run aggregate supply curve will shift to the left when wage levels in the economy are bid up. (This is no different from saying that an increase in factor prices decreases supply, i.e. aggregate supply.) Thus there will be a separate short run aggregate supply curve for every wage and factor price rate.

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5 There are a number of distinctions between these schools, but I will limit myself to using ‘monetarist’ or ‘new classical’, since the nuances are too far beyond the scope of the syllabus.
(Type 4 Smaller heading) New-classical LRAS

Putting the above into points in figure 3.3.5, we get a long run aggregate supply curve showing that real GDP is independent of the price level.

- **A to B**: In the new classical model any increase in the price level accompanying an increase output, A to B in the diagram, will result in higher wages for workers who act to at least retain (if not increase) real wages.

- **B to C**: The increase in factor prices, e.g. labour costs, shifts short run aggregate supply from \( SRAS_0 \) to \( SRAS_1 \) and the economy returns to \( Y_0 \) at a higher price level, shown by C.

- **C to E**: The long run aggregate supply curve shows how firms’ costs adapt to changes in final prices. For example, if the price level increases by 5% and wages and other factor prices also increase by 5% then real factor costs and real wages have not changed. This means that there is in fact no increase in the real price level and therefore no real inducement for an increase in output. Further movements along \( SRAS_1 \) will result in the same thing, moving the economy from point C to D to E via a new short run aggregate
supply curve.

- **LRAS and full employment**: The resulting vertical LRAS curve shows the economy’s long run potential GDP. At this level of output there is full employment; \( Y_{FE} \). (**Strong warning here**: this does NOT mean “zero unemployment” but the “natural rate of unemployment” as we shall see.)

![Figure: 3.3.5 Monetarist/new-classical LRAS](image)

Looking at it in the reverse order, starting at **point E**, consider how a fall in output prices at a given money wage rate would increase the real wage rate and therefore increase the supply of labour – causing an excess supply of labour. Since wages are flexible they will quickly decrease and restore equilibrium on the labour market – and the lower real wage rate would increase aggregate supply from \( \text{SRAS}_2 \) to \( \text{SRAS}_1 \), moving the economy from **point E** to **point C** in the diagram. The long run aggregate supply curve is thus uncorrelated to a change in the price level.

**(Type 5 Smallest heading) LRAS vs. physical limit**

It is most important that you do not confuse long run aggregate supply with the physical limit outlined earlier. The LRAS curve shows *potential real output in the long run*, which is the same as the full employment level. It is possible for real output to exceed this point in the short run – according to most, but not all, classically orientated economists – just as it is possible for real GDP to be less than potential output. The key is in understanding that ‘potential’ in this context indicates the long run capacity of firms in the economy to remain at a certain output level before having to adjust to changes in factor markets. So while firms can physically produce beyond \( Y_{FE} \) in **figure 3.3.5** (right diagram) above, increasing factor prices will force them back to the output level on the long run aggregate supply curve.
1. How/why can an economy be in equilibrium at less than full employment according to Keynes?

2. **STRICKEN!**

3. What was the main criticism of standard economic policy put forward in the ‘Keynesian revolution’?

4. Why might there be unemployment at the equilibrium level of income according to Keynes?

5. The monetarist school in its turn put forward criticism of Keynesian assumptions. Explain how this led to a short run aggregate supply curve and a vertical long run aggregate supply curve.

6. “The physical output limit is not the same as long run aggregate supply”. Explain.

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**Summary and revision**

1. The **Keynesian aggregate supply curve** shows three sections;
   a. a **horizontal section** with high unemployment, excess capacity and unsold stocks in firms;
   b. a **trade-off section** where bottlenecks in supply together with diminishing returns render an upward-sloping curve;
   c. a **vertical section** showing the physical limit of the economy

2. The **monetarist/new classical view** is that there is a long run aggregate supply curve showing the long run potential output of the economy. This is the **full employment level of output**. The vertical LRAS curve in this model is based on the premise that any increase in output beyond income at full employment will drive up factor prices and decrease short run aggregate supply.