## Written Exam Economics Winter 2016-2017

# **History of Economic Thought**

Indicative answers

## 1. Das Adam Smith Problem

The opening sentence in Adam Smith's *The Theory of Moral Sentiment* from 1759 reads *"How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it".* 

Early on in the Wealth of Nations from 1776 – in Book 1, Ch. 2 – the same Adam Smith writes "It is not from the benevolence of the butcher, the brewer or the baker, that we expect our dinner, but from their regard to their own interest. We address ourselves, not to their humanity but to their self-love, and never talk to them of our own necessities but of their advantages".

The seeming contradiction between the tones in these two quotes has been called "Das Adam Smith Problem". Do you think we have a contradiction?

It is not so important whether the responding students see a contradiction or not – it is the arguments that count. At first sight there seems to be a contradiction here. In the TMS Smith argues that it is emotionally important to create happiness. The ultimate purpose for having a good life is see your fellows being happy; in that respect Smith went further than other philosophers in the enlightenment tradition. On the other hand, Smith continued to the very end of his life (and long after the WN had been published) to send out new editions of the TMS.

In my opinion, the (famous) statement from the WN is a description of what makes markets work; I maximize my utility when the other guy maximizes his profits. The best possible product is created and sold when producers focus on his product and not on "helping" me. This is in essence the market oriented and liberal approach to economics!

One may disagree if one believes that markets are fundamentally flawed – responding students of that orientation may refer to Marx, Veblen (in the curriculum) and i.e. Galbraith (only mentioned briefly).

The TMS quote is a general statement where the quote from WN is a description of how markets work the best.

## 2. The 93% Labour Theory of Value

In The Works and Correspondence of David Ricardo, vol. II, p. 66 Ricardo remarks:

"Mr. Malthus shows that in fact the exchangeable value of commodities is not exactly proportional to the labour which has been employed on them, which I not only admit now, but have never denied."

Explain why – according to Ricardo – the Labour Theory of Value may not hold precisely. Is it fair to say that Ricardo may have believed in an empirical and not an analytical version of the Labour Theory of Value?

Ricardo realized that the introduction of time (and therefore of interest, you must be paid for postponement of output) made the labour theory of value imprecise. When production takes time, capital will be more that hours of labour. However, this is a small effect, it is not so important! Ricardo did not coin the expression "A 93% Labour Theory of Value" (George Stigler did in 1958) but to the best of my understanding that was precisely what he meant!

A good answer may include a reference to the "Deer – Beaver example" (mention in curriculum) where difficulties with The Labour Theory of Value arises when the training of the gunsmith and the hunter is introduced. You must for a period feed your workers while they learn and practice without producing anything.

### 3. The Falling Rate of Profit

According to Marx, it is straightforward classical economics that capitalists in their lust for profit will in the end drive the marginal rate of profit down and eventually destroy capitalism. Is that true?

It is in Smith, Ricardo and certainly in J.S. Mill that investment opportunities will be exhausted – the expected yield on applying new capital will fall. So in the end, the economy will land in a steady state with a stationary production and income. That was a basic classical belief, later upheld by many others, i.e. Keynes.

Marx never doubted that but went further and argued that capitalists would battle each another and invest to destroy competitors (monopoly capitalism). One interpretation is they would go below the actual rate of profit when investing, only to reap monopoly rent when competitors were crushed. Accordingly, the world may not end up in a gentle steady state but in deep crisis. That again could pave the way for revolution and the downfall of capitalism.

Therefore, the models appear identical, but consequences are different!

#### 4. Sunspots driving the business cycle

According to Sandmo (p. 178) Jevon's sunspot theory has been characterized as "the most ridiculed idea of his life". Do you think that the idea that solar activity drives agricultural production which again drives the business cycle is ridiculous, wrong or plausible – or some combination of these?

Jevons saw the business cycle as a mystery! He had been constructing time series of various (primitive) indicators and could see that economic activity moved in cycles. How could that be, when markets worked perfectly; the phenomenon could not be explained by some endogenous factor. He never considered something like Marx's over-investment theory and other contemporary writers like Mills had given up. The business cycle must be explained by something exogenous! What he could see was that agriculture and harvest moved up and down, and speculated that temporarily higher prices of food (decreasing real wages) could be the source of the business cycle Being interested in astronomy and therefore in the activity of the surface of the sun he considered the possibility that variation in strength of rays of the sun could course variations in the harvests.

His model broke down when he finally detected that the cycle of the solar activity did not match the activity of agriculture. In the first place, one may doubt that agriculture could drive the entire economy in the entire industrialized world – maybe it could at that time!

However, the logic is temping – that something truly exogenous could be at play. It is hard to see that the idea – given the poor quality of his data and the basic assumption that markets worked perfectly – is ridiculous.

We must be willing to accept that answering students would indicate that his assumptions were wrong and that he should have considered that – in this case, the theory may appear silly!

#### 5. A downward sloping supply curve.

Several writers (Marshall, Wicksell, Joan Robinson and Edward Chamberlain) struggled with the possibility of falling marginal cost curves and downward sloping supply curves.

What was at stake – if we enjoyed increasing returns to scale, wouldn't we have to accept, at MC would fall with increasing demand? How did Marshall and Wicksell handle the issue? When we introduce imperfect / monopolistic competition, the issue appears to vanish, how and why?

Marshall and Wicksell were haunted by the possibility that the supply curve could be downward sloping! Should that be the case, marginal costs would be falling and equilibria in the market would be unstable. An increase in demand would lower the price. That could go on and on without stability!

Long Run Supply in a Decreasing Cost Industry

long Run Supply  $D_1$ D<sub>2</sub> D. 0

Obviously, falling MC and a downward sloping supply curve could happen with increasing returns to scale.

Marshall argued that increasing returns is a possibility. At a certain point in time, each firm will be facing a short-run rising MC-curve, so the system will be in equilibrium. However, over time an industry may enjoy falling MC; the example used in class was the IT industry. Dell, HP, Leveno etc. will each reach an optimum, but the entire marked grows, the price of the components go down, capacity per unit goes up and costs per unit of computations fall considerably and the market goes on expanding. That the sale of HPs helps Dell is what Marshall calls external effects (not the same as Pigou's external effects!). So equilibria here and now, but decreasing MC and price over time!

Wicksell told a slightly different story. The individual firm may at a certain point in time enjoy increasing returns to scale, but at the industry level this cannot happen. The individual firm may have U-shaped average cost curves – first increasing returns, then constant returns and then decreasing returns and competition will force the firms to produce at the minimum average costs.

So order is secured!

When Joan Robinson introduced imperfect competition and Edward Chamberlain introduced monopolistic competition they sought to give a more realistic picture of competitive behavior. It is not obvious that they had stability on their minds. However, with falling demand curves, one may have stability even with falling MC. Joan Robinson's model is this



And it appears intuitively clear that a downward sloping MC will not alter the situation.

#### 6. Ordinal utility and welfare economics.

Pareto concludes in his *Manual of Political Economy* from 1909 (translated into English 1971), quoted from Sandmo p. 252 that

"We will say that the members of a collectivity enjoy maximum utility in a certain position when it is impossible to find a way of moving from that position very slightly in such a manner that the utility enjoyed by each of the individuals of that collectivity increases".

1) What do think of the term "maximum utility" in this context? 2) compare Pareto's dictum with Pigou's equally famous statement:

"It is evident that any transference of income from a relatively rich man to a relatively poor man of similar temperament, since it enables more intense wants to be satisfied at the expense of less intense wants, must increase the aggregate sum of satisfaction. The old law of "diminishing [marginal] utility" thus leads securely to the proposition: Any cause which increases the absolute share of real income in the hands of the poor, provides that it does not lead to a contraction in the size of national dividend from any point of view, will, in general increase economic welfare" (Economics of Welfare, 1920, 4<sup>th</sup> ed 1932, p. 89).

Firstly, "maximum utility" is in the context of ordinal utility a strange word. It appears to indicate that total utility can be measured – a function that can be maximized – and the point is that this is not possible! However – and that must be what Pareto meant – we can reach the best possible situation when his condition is met.

Pigou argues that when marginal utility falls with rising income it is possible to increase "the aggregate sum of satisfaction" by taking from the rich and give to the poor. So either this aggregate sum is a concept different from what Pareto wrote about, or they disagree. On the one hand it is easy to say that Pareto is right and Pigou is wrong, on the other it is extremely tempting to dismiss Pareto as that would make redistribution of income impossible, at least if that policy should be based on scientific arguments.

The only common ground is that Pigou indicates that redistribution is problematic when weaker incitements reduces the "national dividend" by reduces the production / income that could be redistributed.

## 7. The relationship between the functional and the personal distribution of income.

Piketty and Zucman show in their *Capital is Back: Wealth-Income Ratios in Rich Countries 1700 – 2010*, QJE 2014 that W/Y (= K/Y) or  $\beta$  has increased after World War II. Are they right to argue that this has made the personal income distribution more uneven?

The P&Z's argues in a simple Solow growth model. In steady state,  $\beta$  goes up with an increasing savings ratio and down with a higher growth rate. As growth rates have been declining after WW II (more in Europe that in the USA) and when savings ratios are high and not declining (more so in Europe then in the USA),  $\beta$  goes up. That is demonstrated beyond

any reasonable doubt! Assume that wealth is distributed unevenly (P&Z's data suggest that housing takes up a large part of wealth everywhere) and if yield on wealth is high and the factor share have not changed very much, it is likely that increasing  $\beta$  indicates a more uneven distribution of personal income.

One counter-argument is that in some countries (Denmark is an example) an increasing part of W is owned through pension schemes and that this could explain why the income distribution has not changed much in such countries.

Another argument – not contradicting P&Z - is that the remuneration of the "super managers" shifts the income distribution. Options and other management packages transfer wealth from business to wealthy managers and affect the personal income distribution.

Responding students may speculate upon the fairness of this. If people are good, isn't it fair that they get wealthy? And wouldn't higher taxes – on wealth and income – be counterproductive? (Ref. Pigou)

## 8. The IS-LM interpretation of Keynes' General Theory

In his (now) famous paper *Mr. Keynes and the 'Classics'*. Econometrica 1937, John Hicks sought to provide a formal model that should demonstrate the essence of Keynes' General Theory.

Hicks' paper is available in many places and may be downloaded from the *Resource page* on our Absalon.

1. Read Hicks' paper and explain the IS- and the LM-curves.

(We will use modern symbols and labels, while accepting that answering students may you Hicks's difficult notation). The LM curve illustrates those combinations of Y and r that establish equilibrium in the money market. In The Keynesian version, it is flat to the left (the liquidity trap) and may be steely rising to the right (the economy approaching full employment). The IS curve illustrates equilibria in the real sector; when the interest rate is high, investments (and – through the multiplier – income) will be low. Now this is Keynes, based on these equations:

M = L(Y,i) I = f(i) I = S(Y,i) [Y is what Hicks calls I in the diagrams]

Hicks discusses whether the interest rate should be in the savings function; without that we have the simple multiplier and within saving and consumption is also influenced by the interest rate. No consequences here!



Now, in the classical version we have

 $M = kY \qquad I = f(i) \qquad I = S(i, Y)$ 

The major difference being that we have no liquidity preference, the LM curve must be vertical; Hicks discusses what happens when the money supply is increased. In the real classical model prices would go up, however these are stable here (in fact not considered; Hicks says something about k becoming endogenous. The IS must be as in the Keynesian version. However, the intersection between IS and LM in the Classical world can only happen over full employment Y as that in this model is by the supply side. So LM must be vertical and crossing the Y-axis at the full employment level. From a formal point of you the two models differ in one respect, liquidity preference is a fact of life in the Keynesian version, making monetary policy meaningful, however difficult when interest rates are low. On the other hand, why conduct monetary policy in a classical model with fixed prices, Y is at full employment. The bottom line is that IS-LM has little meaning in a classical model with full employment.

2. What is the interpretation of the point of intersection between the two curves? Sketch a Keynesian and a Classical set of curves. According to Hicks, which is the major difference between Keynes' model and the Classical model?

As mentioned, the liquidity preference! It is meaningless to set up at classical version of the IS-LM! With no liquidity preference, on cannot change the interest rate and with full employment, IS must be vertical.

3. In class we discussed the causes of unemployment; all of you said that unemployment is caused by some kind of inflexibility in wage formation – were wages perfectly flexible, we would have full employment! Does that match Hicks' version of Keynes' model? Does it match Keynes' own version?

According to Hicks "money wages per head, can be taken as given" (p. 148 in the version offered for download)– in the Keynes model as well as in the classical version. This is not completely different from Keynes' own version as discussed I Sandmo's chapter on Keynes. Keynes said that wagers would be inflexible in most cases and even if they were flexible and falling under unemployment, employers may start waiting for further drops. What mattered was expectations about profitability, taken account of in the Marginal Efficiency of Capital (MEC). So, in the pure Keynes model, inflexible wages are not the cause of all evil. When we consider an open economy (and Keynes did not do that in the General Theory but elsewhere) things are different.

4. Later in the development of macroeconomics (most famously by Don Patinkin in 1956 and by Axel Leijonhufvud in 1968) it was argued that the Keynesian idea could be that wages are flexible but slow to respond to changes in demand and supply in the labour market. What do you think of that – as a description of reality and as an interpretation of Keynes' own arguments?

There are many solid arguments for wages not being flexible – wages contracts, trade unions, staggered wage setting etc. etc. So short-run inflexibility and slow adjustments appear reasonable. However, it may not be what Keynes and Hicks assumed! One may speculate that they both wanted to differentiate their theory from the idea (well known in the 30s) that to battle employment, wages must come down – no, demand should be expanded! This however, cannot mean that wages never could be a problem. Patinkin and Leijonhufvud could be perfectly reasonable, but it is not in the General Theory!

5. In 1978 Joan Robinson attacked Hicks' interpretation of Keynes by saying: "J.R. Hicks was one of first, with his IS-LM, to try to reduce the General Theory to a system of equilibrium. This had a wide success and has distorted teaching of economics for many generations of students". Explain and discuss that statement. (Hint: take into account Keynes' thinking about expectations as discussed in Sandmo' Ch. 15 on Keynes)

The IS-LM is an equilibrium model – the intersection between IS and LM is an equilibrium point! Answers to this question may point in many directions. Somehow economic policy in an IS-LM appears too easy. If demand is inadequate, expand public expenditure, cut taxes and your problems are solved! In some case, you can also conduct expansionary monetary policy. Then we have the restrictions in an open economy, however that was not what Joan Robinson was aiming at.

Answers may depend upon how much students understand of Joan Robinson' attitude. Some would argue that she did not understand how much one can do in equilibrium models, while others would point to MEC and Keynes' ideas about wild and very un-rational expectations. Investors work in a mist of uncertainty and have to rely on gut feelings rather than calculations:

"If we speak frankly, we have to admit that our basis of knowledge for estimating the yield ten years hence of a railway, a copper mine, at textile factory, the goodwill of a patent, an Atlantic liner, a building in the City of London amounts to little and sometimes to nothing (GT, pp. 149 - 50)".

Here and in many other places Keynes is pessimistic with regard to the rationality of businessmen and sees public intervention as a necessity. Keynes – in Robinson's interpretation is an ever moving thing, never resting and always driven by expectations.

There is one amusing fact here! In a letter to Hicks written after Hicks published the article read by students responding to this, Keynes said that "The story that you give is a very good account of the beliefs which, let us say, you and I used to hold". Nothing of a fundamental disagreement here!