

Some Notes on Hicks on Monetary Theory

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I. Introduction

John Hicks is justly famous for changing his mind. *Value and Capital* (1939) is celebrated as one of the finest statements of neo-classical theory, extending general equilibrium into a dynamic framework, and was the basis for Hicks's Nobel Prize. Yet, almost 40 years later, in the Preface to *Economic Perspectives*, Hicks (1977) writes, it was with mixed feeling that I found myself honoured for this work, which I myself felt myself to have outgrown.¹⁾ He rethought the subject of economic dynamics in two major works, one that is broadly classical, the other Austrian. Likewise, he developed the IS-LM model to elucidate the ideas of Keynes' General Theory, and again, in later years he came to have serious reservations, particularly about the static nature of the construction, which he considered especially defective in regard to money and liquidity.

This suggests that we might see the development of Hicks's monetary thought in general in

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1) The dynamics of *Value and Capital* depended on the assumption that current transactions would have immediate effects on expectations, even before the transactions were completed, so that the prices and quantities established currently would also reflect expectations. That however was nonsense (p. vii), he concluded, and this led him to *Capital and Growth*.

the same way-over the years he came to see more deeply into the subject, and accordingly reexamined his work and changed his mind. Hicks began his career as a supporter, in certain respects, of the Quantity Theory on its cash balance form. He quickly moved to support Keynes, then came to feel that money for transactions was not a voluntary matter at all, and so could not be analysed by portfolio theory. But portfolio theory itself, he came to feel, was deficient as a way of treating liquidity. Nor did it help that much in understanding banking. That required a better understanding of credit and of clearing, and the system had to be stabilized by government. At the end, his position, in part, is very close to that of the horizontalists-money is endogenous, and the Central Bank pegs the interest rate.

II . Development of Hicks' Monetary Theory

In his first major contribution to monetary theory, *A Suggestion for Simplifying the Theory of Money* (1935), Hicks proposed applying the apparatus of supply and demand to money.²⁾ As his example, he took inconvertible paper money in a system without banks. The Quantity Theory Equation gave an oversimplified, but essentially correct, account of the determination of the price level of consumer goods, but the interesting questions centred on the determination of the prices of investment goods. It is there that the marginal utility theory came into play : investors had to choose between holding new capital goods, holding securities or holding money. So value theory could be applied to the supply and demand for money to hold. The crucial decision to analyse was the decision to hold apparently barren money instead of an asset with a yield. The reason to hold money, however, was that it did have a yield, though neither reliable nor easily calculated. Although in Hicks's opinion convenience or reduced

2) In the older versions of the quantity theory supply and demand for money - money that circulates goods, active money - determined the price level. But here supply and demand for money to hold, that is, idle money held as an asset, determines the rate of interest. These are not inconsistent, but the problem is more complex. There are four unknowns to be determined : the amount of circulating money, the price level, the amount of asset money, and the usual equations for the demand for circulating money and the demand for asset money. But now there must also be an equation for the division of the total supply into two parts.

transaction costs played a role, the main reason for holding money is speculative. Returns on investment are uncertain, and risk is unavoidable. A portfolio will be constructed to reflect this. Changes in wealth will then affect the demand for money, but not in any simple way. In particular, Hicks argues that the conventional assumption that demand for money will rise in stable proportion to wealth is incorrect. It may rise, but it could even fall. And this means that the monetary system may be unstable.

The problem is that the supply and demand for money, which might be stable if agents considered only the levels of prices, becomes unstable as soon as agents form their expectations by reacting to changes. According to the standard doctrine, an increase in net wealth for some agents will raise the demand for money. This in turn will tend to raise interest rates, reducing the demand for bonds and security prices, reducing new wealth for some - probably different set of agents. The effect, then, is stabilizing. But Hicks argues first that it is not so clear that a rise in net wealth will raise the demand for money. The linkage is not at all tight. More importantly, however, a rise in net wealth is likely to raise expectations. Conditions have changed; wealth is increasing and further increases can be expected. But if expectations of a boom develop, the demand for money will decrease, interest rates will therefore tend to decline, and bond and security prices will rise. This will be destabilizing.

This paper introduced a number of important themes that remained a part of Hicks's thinking, although he changed his position on many of them. Among these themes were the supply and demand apparatus, the portfolio choice approach, the question of stability, the problem of liquidity, the stock-flow distinction, and the exogenous supply of money.

His next contribution quickly became famous. In *Mr. Keynes and the Classics*, Hicks introduced the IS-LM diagram to summarize the way Keynes related monetary questions to unemployment. The LM curve shows the locus of combinations of interest rates and income for which the supply of money is equal to the demand, where the supply is taken as fixed exogenously. However, Hicks went beyond a suggestion in stressing the importance of the flat section of the LM, and explaining the speculative demand in terms of the relation between short and long rates. According to Hicks(1937, p. 137),

The long rate must be a sort of average of the probable short rates over its duration, and ... this average must lie above the current short rate. There is also ... the

important risk ... that the lender on long term may desire to have cash before the agreed date of repayment, and then, if the short rate has risen meanwhile, he may be involved in substantial capital loss. It is this last risk which provides Mr. Keynes's speculative motive.

The Two Triads in Hicks's *Critical Essays* (1967) begins to unravel the portfolio choice equilibrium approach.³⁾ First, Hicks rejects his previous treatment of the transactions demand. He writes (1967, p. 16) that it is not a demand for money, in the way that the other [demand for M_2] is. There is no Transactions Motive behind it. It is the money that is needed to circulate a certain volume of goods, at a particular level of prices. Second, the point about the unreliability of the relation between wealth and the demand for money is developed further. When wealth declines asset holdings will have to be adjusted in relation to current transactions; minimum levels of money holdings will have to be restored to cover current obligations. But there is an asymmetry : when wealth increases there need be no shift between asset holdings and current activities. There is no reason to suppose current spending will be increased. On the contrary and additional wealth may most plausibly be used to add to holdings of existing real assets (p. 52).⁴⁾ It is for this reason that he rejects Patinkin and his effort to ground monetary theory on real balance effects.

The preceding argument depends on another point first developed here by Hicks, but elaborated later, namely that assets may be divided into running, reserve and investment assets. And each of the three categories can be either financial or real.

Running assets are those used in the course of business, corresponding to working capital; they can be bank or money market accounts, or inventories of materials or goods-in-process. Reserve assets are those held as a precaution or for emergencies, extra materials or reserve machinery and equipment, and of course, precautionary balances. Investment assets may include real holdings, such as land or buildings held for the rental income, or machinery that is on

3) In the same volume Hicks has a revised version of his 1957 review of Patinkin, "The Classics Again", in which he introduces, the idea of a point of Full Unemployment, at which money wages would begin to fall, to be symmetrical with Full Employment, where they begin to rise. He notes that many Keynesian propositions can easily be found in classical models, once the speculative and precautionary demands for money are admitted, so that the LM is no longer vertical. In Wicksell, he observes, the LM would be horizontal.

4) Here, as later, Hicks notes the importance of Hawtrey, who argued that changes in interest rates would have an effect on the prices of holdings of commodities.

occasion rented out; financial investment assets are those that are held for the income or yield.

The implication of this is that liquidity is a relative matter, a matter of the quality as well as the quantity of various assets, while asset choice is not only more complex, but also may be sequential. Funds may be shifted from one category of assets to another for a variety of reasons, which may arise during the normal course of operations, and these shifts will change the liquidity picture, but not always in ways that can readily be reduced to an arithmetical ratio (1989, pp. 62-63).

In *Monetary Experience and the Theory of Money* (1977), Hicks developed the themes from the Two Triads still further. He begins with the quantity theory in a metallic monetary system where m will be mined and thrown into circulation in the first period. Then in the second period, another m will be added, but the first will still be in circulation. And so on, for the third and successive periods. According to Hicks (1977, p. 52) : It will be seen that the income generated, in period 5, is $5m$, (m from the production of new silver and $4m$ from the spending of what has been formerly produced).⁵⁾ He then goes on to explore leakages from circulation into hoards, saving and finally borrowing and lending. Leakages lead to income expanding less than in proportion to money; but borrowing and lending lead to expansion more than in proportion. Money establishes a ceiling, and a cycle can be envisioned : a boom begins, borrowing and lending accelerate it, but the fixed amount of money entails rising interest rates, which, in turn lead to a liquidity crisis, bringing a crash and a downswing. The unchanged supply of metallic money⁶⁾ will eventually encourage spending, providing a floor. The fall in interest will encourage recovery (see 1977, pp. 53-55).

But exogenous metallic money is expensive. Credit can circulate goods more cheaply and more conveniently. Hicks then moves on to consider Wicksell. He focuses particularly on Wicksell's model of a pure credit economy, exploring how a divergence between the money rate of interest and the real rate of return could lead to inflation or deflation. In this approach money is fully endogenous - it is credit-money. But in a system of credit-money, Hicks argues, the quantity theory is inapplicable, because, even if the overall quantity of money is

5) But income is not equal to the amount of money circulating; it is normally greater. A quantity of money circulates goods of greater value than itself, because goods are used in the production of each other, and labour, supported by consumer goods, is used in the production of all goods. Hence when money is spent on goods, it is re-spent on the inputs into those goods, and on labour, that is, consumer goods, circulating them as well. Hicks does not seem to appreciate this. (Nell, 1998)

6) Monetarism, in such an economy, would not be a policy; it would be a fact (1977, p. 87).

(somehow) strictly controlled, the link between the total Quantity of Money and that part of it which circulates is effectively snapped (1977, p. 63). The reason is simple : when money is metal it yields no interest. Idle balances involve a substantial sacrifice, so funds will not be borrowed unless they were intended for spending. But in a credit-money system, any funds borrowed must be redeposited. For by definition they cannot be withdrawn from the system. Hence the loss on funds borrowed and left idle is merely the margin between borrowing and lending rates, and the additional liquidity may easily be worth the price.

So the quantity equation can tell us nothing; it determines nothing. The banking system is assumed to be competitive, so bank money will be provided to any credit worthy borrower. Money is therefore endogenous. It is the rate of interest that determines what happens, and it does so by virtue of its relationship to the real rate of return or rate of profit in the economy. When the money rate lies below the real rate of return, there will be a tendency to increase investment and prices will rise in a cumulative process; when the money rate is above the real rate investment will be weak, and prices will decline. This corresponded to the circumstances of the era in which Wicksell was writing, the Great Depression of the late nineteenth century, during which prices declined steadily. However, during this period productivity growth was strong, providing another reason for prices to decline. Hicks points out that it will be almost impossible to disentangle these influences.

From Wicksell, Hicks then moves on to Keynes, asking why Keynes, who well understood credit-money, put it to one side in the General Theory. The money in the General Theory is bank money; but it is exogenous. Hicks's explanation is that Keynes considered the banking system to be non-competitive. Hicks suggests a core - a central bank - surrounded by a mantle, using the geological metaphor. The core lends to the mantle, the mantle to industry (and households). being non-competitive, the core can restrict quantity. Given such an exogenously determined supply of money, changes in investment or other spending will have to be financed by changes in the liquidity positions of the mantle or of industry, and such changes can be expected to react back upon interest.

According to Hicks (1977, pp. 79-80),

An increase in real investment, with constant supply of money ... must reduce liquidity somewhere. if the investment is financed by borrowing, the main loss in liquidity falls on the mantle; If by drawing on reserves, the main loss falls on industry itself ... in the

choice between different methods of financing the interest charged (or given up) will always be an important consideration. But for the rest one need pay little attention to interest rates, changes in which emerge as consequences of changes in liquidity. ... The Keynes monetary model ... does not seem to differ so very much ... from the Classical model. ... It is indeed hard to see that there is anything in Keynes which corresponds to the 'equilibrium path'. ... Nevertheless, so long as the supply of money is determined exogenously, there is still a ceiling, of classical type. ... The system does not have to be on its ceiling; positions ... that are below the ceiling are possible and indeed likely.

But these are not the distinguishing questions of Keynes's analysis. For Hicks (1977, p. 73), Wicksell's was a theory of Prices, Interest and Money; Keynes's of Employment, Interest and Money. Keynes in the Treatise also deals chiefly with prices; in the General Theory he takes up quantities.⁷⁾ In the context of the 1930s, he dismisses long-term equilibrium, and the normal level of employment.⁸⁾ To examine employment, Hicks (1977, pp. 80-81) claims that Keynes assumes.

that the wage-rate, or wage-system, is exogenous. ... If the sole effect of an increase in effective demand (in money terms), raising the wage bill in money terms), was to raise the money wage, instead of raising employment, the Keynesian system would collapse. [So] the center of the Keynesian system is surely a model in which, at levels of employment less than full employment, the money wage does not change.

Hicks (1977, p. 81) then draw the supply curve of output : At less than full employment a change in PQ will mainly change Q. ... but when full employment is reached, Q can increase no further, so the main effect of a further increase in PQ must be on P. This is a curve with

7) This is also the subject, in Hicks's view, of Hayek's Prices and Production. However, Hayek's story, he feels, was set forth in the wrong context. It is not about the cycle; it is a growth story, and it depends on a lag, in a manner that is extremely implausible. But a more reasonable interpretation is possible, allowing us to see that an interesting mechanism is at work, although it appears to be quite a special case.

8) Hicks is surely right that Keynes shifts from a long-period equilibrium approach to a short-period analysis, although Garegnani, Eatwell and Milgate have all tried to argue that Keynes retained the traditional framework. But Hicks does not explain why the long-term approach was more appropriate in the earlier era, and the short-term in the later. What had happened to the economy, what had changed, to make a long-period equilibrium approach no longer suitable? Hicks's argument throws up this question, but he does not ever address it.

a horizontal stretch, then turning sharply vertical. He modifies it by suggesting that at high levels of employment prices will begin to increase, and will increase steeply as employment is further increased, so that a curved line will rise from the horizontal approaching the vertical full employment line asymptotically. Strictly speaking, full employment can be approached but never reached (see figure 1).

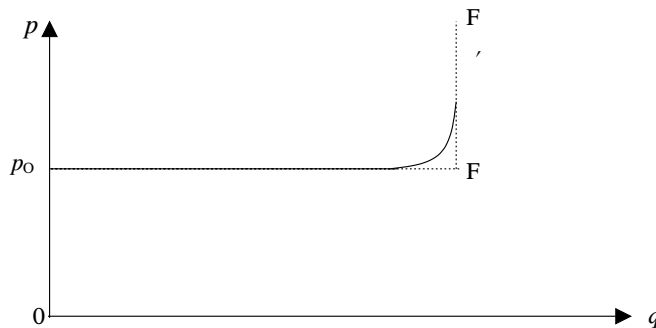


Figure 1 : Hicks's price-employment diagram

According to Hicks (1977, p. 84),

The possible equilibria, of a Keynesian system, are limited by a Full Employment constraint; but the system is always within that constraint, so it is always, in that sense, depressed. It is similarly limited by a monetary constraint; but it is also always within that constraint - so it is depressed in that sense too. Keynes is not just showing that Unemployment equilibrium is possible; he is also showing that it is inevitable. It is inevitable, in his system ... that there should be idle labour, and it is also inevitable that there should be idle money.

So there are two ceilings. If the monetary ceiling is lower, the approach to full employment is prevented by scarcity of money, but removing this scarcity will not ensure increased employment : the additional money can be absorbed in idle balances. (Hicks also observes that the long rate is slow to adjust to changes in money, and investment is slow to adjust to changes in the long rate (see 1977, p. 85)

What then can be learned from the classics, Wicksell and Keynes that will be useful in the new conditions emerging in the mid 1970s - what we would now call the end of the Golden

Age? During that period - the Bretton Woods era - there was moderate inflation, relatively rapid growth and relatively low, but still significant, unemployment. Since then, however, inflation has been much higher and unemployment much more severe. The classics offer little help in understanding the current environment. In particular, monetarism is simply wrong. The economy has begun to work in a Wicksellian manner; there is no purely monetary constraint. Keynes, too, will have to be modified. The supply curve of output will have to be redrawn, this time for growth (see, figure 2). So the axes will be the rate of change of prices and the growth of output; points on the curve, however, are now alternative long-term positions. It is not a curve along which one can envisage the economy moving.

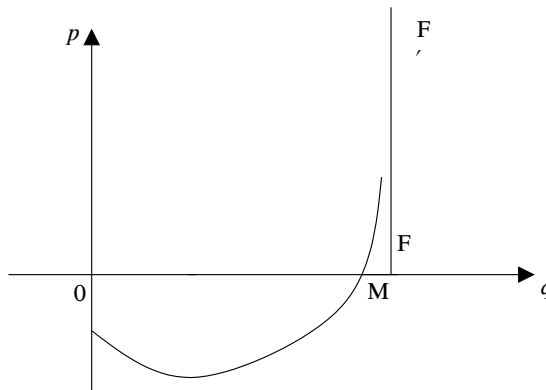


Figure 2 : Hicks's growth supply curve

The curve begins from a negative intercept; prices will fall at zero growth. Then as growth rises, productivity growth increases and prices will decline even more rapidly, until growth is high enough to strengthen wage bargaining so that price declines moderate and the curve turns up. A point will be reached where the curve crosses the horizontal axis, at which growth is positive and fairly high, but inflation is zero.⁹⁾ Above this point inflation will be positive, with strong wage-bargaining and shortages in some industries, and will increase rapidly with further rises as the system approaches the full employment rate of growth. The system will not tend to rest at the point of zero inflation; political pressure will also tend to push it above. But

9) Hicks notes the similarity to the natural rate of unemployment, but the rationale is different, and he goes on to argue that the zero price inflation at this point is made up of positive inflation that is just cancelled by price declines.

purely economic pressures will tend to generate inflation.

Productivity growth will surely be uneven, there will be sectors in which it grows faster, and others in which it grows more slowly. However, wage increases can plausibly be assumed to be uniform, and the mark-up constant. This combination creates serious pressures; if the price level is to be constant, prices in the fast productivity growth industries must fall, and the prices in the slow industries rise. But the issue does not show up clearly enough in this way. It is better seen set out in a simple model, in which two countries trade, where one is fast and the other slow, and each also produces non-tradables with the given resources. Hicks shows that under plausible assumptions, the overall level of prices in the fast country must rise relative to the level in the slow country. Furthermore, it is likely that the slow will experience an adverse balance of payments, leading to exchange rate pressures that will exacerbate the rate of price increase, first in the slow and then in both countries.

Strong, independent wage-pushes are unlikely, Hicks feels, though possible. But in the post war world wages have to be fair, (a point Solow has recently emphasized). For Hicks (1977, p. 102),

The contract of employment ... is an arrangement under which people have to together; they will not work together efficiently unless the terms of employment are felt to be fair, by both sides. ... The pursuit of fairness has many difficult aspects, but one of the clearest and least controversial of the demands which it makes is for continuity in standard of living.

If prices are pushed up, then, money wages will have to keep pace. Prices are also likely to be pushed up by strong growth, since this will put pressure on primary production. Hicks sharply distinguishes manufacturing, in which costs diminish, and prices are sticky and cost-determined, from primary production, where diminishing returns (increasing costs) prevail, and prices may be demand-driven. A rise in primary prices, caused by demand pressure, will tend to be translated into higher product prices throughout the economy, raising the cost of living, and so setting off compensating wage demands. The result will be a wage-price spiral. This can be modelled by drawing a version of the same curve, starting from the same intercept, but beginning to rise earlier, so that the latter portion of the curve lies in closer to the origin. If this holds, growth cannot rise towards the full employment level, since it is in effect constrained by primary scarcities (see figure 3).

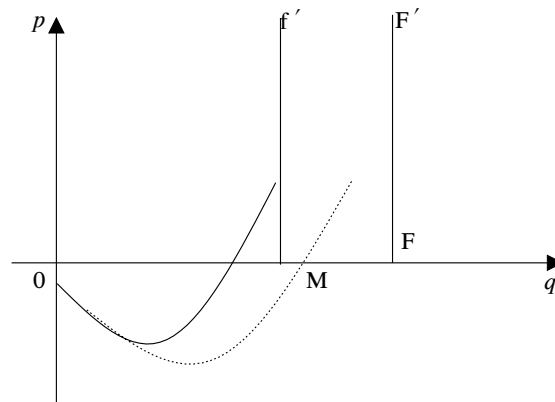


Figure 3 : Hicks's shifting growth curve

Inflation, then, is to be explained by wage norms and wage pressures, by the differences between primary production and manufacturing, by the effects of uneven productivity growth, and by effects arising from international trade. Inflation is not a simple monetary matter, nor is it the consequence of a single cause.

All the strands are pulled together in his last work, *A Market Theory of Money* (1989), a remarkable book, apparently very simple, but actually complex and requiring a close study. It begins with an account of markets, arguing that the theory of long-term equilibrium must be abandoned, but that it cannot be done simply on the basis of an assumed rigidity of money wages. To understand unemployment and effective demand it is important to understand how markets work, and how this working is facilitated by money.

First he argues that the traditional theory of supply and demand suffers from a fatal defect—supplies and demand for flows, the usual story, must be coordinated with those for stocks. It is of little importance that a flow market does not clear if the reason is a desire to build up or reduce stocks.¹⁰⁾ On the other hand, the usual story of supply and demand cannot be applied to markets for stocks, since these tend to involve important speculative elements. Speculation, however, takes place in a sequence of transactions, virtually requiring futures markets; so demand and supply in a period or at a point of time will not be sufficient to determine price. Speculation rests on special institutions, and because it is essentially sequential, it can be stabilizing or destabilizing, but the latter cannot be avoided.

10) Consideration of stocks requires bringing in the rate of return; in the real economy this is the rate of profit. This is where the classical equations come in.

Manufactures do not involve speculation; they are priced on the basis of costs, which tend to diminish with volume. So markets for manufactured goods tend to be fixprice markets. This has roots on the demand side as well as they supply side; markets for manufactures tend to be customer markets - in Okun's sense. Prices need to be stable; price reduction will be resisted, while price rises will generally take place only on the basis of cost increases. This does not mean an absence of competition, but rather that competition takes place through innovations and sales techniques.¹¹⁾

Labor markets, however, tend to be fixprice. Competition in the labor market tends to work in terms not of actual transactions but potential ones, making it difficult for competition to push wages down. Hicks distinguishes between established labour, workers in relatively permanent positions, and fluid labour, in short-term or temporary jobs. Established labor must be treated fairly, and cannot have its expectations seriously disappointed. Unions serve the function of brokers, providing information and helping workers to bargain for fair wage levels.

Money appears first as coinage, which has a fiduciary aspect. Money transaction replace inefficient barter. Money is a standard, and a medium of exchange; it is also a store of value but so are many other things. The liquidity of money follows from it being a means of payment, and a standard. In the end credit is more important as a means of payment than coins. Credit begins as promises to pay arising from trade. Being believable, these promises are accepted and passed on as means of exchange. Such credit depends on the credibility of the traders. A promise must be accepted, and a market for acceptances arises. This all becomes much simpler and more efficient when banks take over this business. Banks begin by accepting deposits, discounting bills and lending, holding reserves. Banks deposits can be used as means of payment; then banks come to create money. But this requires banks to work together, which in turn calls for government backing.

In a sense, Hicks's project is to integrate Keynes and Wicksell, and to reestablish Keynesian theory on the basis of a pure credit-money system, while adapting it to contemporary conditions. This means rethinking price theory and developing the theory of speculation, so that it applies not only to money, but also to investment, the change in the real capital stock. To do this adequately requires an understanding of just how the economy has changed since the time of Wicksell and Keynes. Much of the book is devoted to consideration of the differences between their time and ours. In particular, Hicks considers the shift from flexprice

11) As we saw earlier, markets for primary goods tend to be flexprice markets.

to fix price, from proprietorships to corporations, from metallic and exogenous money to credit-based endogenous money, and from a trade cycle chiefly manifested in price changes to one in quantities and employment.

While that is all correct, a certain coherence to the whole picture is still lacking. Hicks certainly sees that these elements are linked, but he does not account for them systematically; yet these observations do find their place in the Theory of Transformational Growth, (Nell, 1988).

III. Reflections

For Hicks, monetary theory is closely related to real-world issues : it is the least abstract and most policy-oriented branch of economic theory. There is a good reason for this; the monetary system is either unstable, or on the edge of being unstable, and government action will be needed to stabilize it.

Hicks does not seem to see that metallic money already has value, that is, the value of the metal, that is to say, the cost of production in mining. This value must be matched to the value of the goods for which money exchanges in the process of circulation. If it is less, then there will be a shortage of money, and prices will fall, which is to say that the value of money will rise, stimulating production from the mines. If it is more, there will be excess money, so prices will rise and the value of money falls, leading to cutbacks in the mines. In other words, the money in circulation adjusts through the price mechanism, although of course, such adjustments will be slow.

Hicks does not seem to be aware of this adjustment process,¹²⁾ although he quotes Hume at length (see Hicks, 1977, pp. 160-161) where Hume describes how a nation adjusts to a large

12) Indeed, he describes the simple, hard money case as one in which there was on doubt that the supply of money was controlled, ... (as far as the institutions of that economy were concerned) by natural forces, which no one could do anything about (1977, p. 87). This is not consistent with the quantity of money adjusting in response to a difference between the supply price of money (the money-article) and its value in circulation.

influx of silver. It will drive up prices, he notes, but it will also increase output. Indeed, that is just the point. The quantity of money thrown into circulation, given its intrinsic value, is a mass of greater value than the aggregate value of the quantity of goods to be circulated. So prices must rise - but, in addition, the higher prices may well stimulate an increase in the output of goods. To the extent that such an increase takes place, the pressure on prices, and on the quantity of money, to adjust, will be reduced. Hicks's use of Hume appears to suggest the very adjustment mechanism that he overlooks.

Hicks contends that banks and financial institutions, like money itself, arose to reduce transactions costs. In fact, in *Critical Essays*, Hicks (1967, p. 7) argues that one way of looking at monetary evolution is to regard it as the development of ever more sophisticated way of reducing transactions costs. This cannot be so, at least not in any simple sense - the financial sector has grown rapidly in the past half century and now comprises almost 20 percent of GDP - surely a larger fraction than ever before in history. How can this be reconciled with reducing transactions costs?

Hicks is probably best described as a chartalist - a Keynesian chartalist, not very close to Knapp. He is certainly not a metallist. Government is crucial - the monetary system works because it is stabilized by government policy. But he neither subscribes to, nor rejects, the specific view that paper money rests on the power to tax. He simply does not discuss it. However, he does hold to another chartalist pillar : he observes that there is an aspect of credit, fiduciary aspect, to any kind of money.¹³⁾ Even metal coins rested on belief in the promise that the mint that produced them would exchange worn coins for new ones. Convertible paper money rests on confidence in the issuer. Inconvertible paper rests on belief in the soundness of the managing government and its policies.

He believes that money arose in trade, and is based on trade credit and in discounting bills of exchange. Banks arose not only through providing safe storage of assets, and issuing tickets that were claims to redeem those assets (the origin of bank notes, Hicks believes), but also through providing arrangements for the clearing of bills and trade debts. To ensure clearing and to maintain stability requires a lender of last resort, and this will need government backing.

13) He would probably have agreed with Keynes's remark that in existing conditions, the rupee, being a token coin, is virtually a note printed on silver (Keynes, 1913, p. 26). That is, a coin may function as a token, because of policy and other circumstances, in contrast to the normal behavior of full-bodied coins. But there is nevertheless an important difference between a metal or metal-based currency, and purely nominal currencies, and Hicks recognizes this.

However, Hicks does not wholly endorse chartalism. He is too well aware that governments have not always been stable, nor have they always had full control over their own territory and people. Indeed, for a long time, financial markets looked on governments with great suspicion - lending to the crown could be dangerous as well as profitable. In the British case, two developments helped to overcome this suspicion. First there was the founding of a national bank - the Bank of England - which borrowed from the public and lent to the sovereign. This put the Bank between the lenders and the crown, which could be presumed to be unwilling to allow the bank to fail, since it was so useful. The second was the decision to consolidate the National Debt into perpetual bonds - consols - that never had to be repaid. This meant that the government would not have to go into the market periodically to raise funds for large-scale repayments, simplifying the management of the debt. These two developments were essential to bringing the market to believe that the government had now become creditworthy - and soon it became the most creditworthy agent of all.

The monetary and banking sector underwent considerable change, from metallic money and convertible bank notes to modern credit money. But this is not the only major development in the economy. Hicks is sensitive to economic history and also observes that the goods markets have changed from flexprice to fixprice, as business firms have changed from proprietorships to joint stock corporations. These changes have led to the trade cycle having a different character - the old trade cycle, for example, as described by John Stuart Mill, was a financial cycle in which the main fluctuation was in prices. Unemployment only occurred during the crisis as a consequence of firms having to close their doors. It differed markedly from the cycle of today. He also notes that governments have grown larger and have taken on many more functions. He describes these changes, and also notes that like the monetary developments, they call for changes in theory - price theory must explain the working of fixprice markets, and these will run on different principles from flexprice markets. Corporations will behave differently from single proprietorships, and contend with different problems, for example, the complex and changing relationship between ownership and control.

But what he does not see is that behind all of these changes lie the forces generated by the changes in technology, the evolution of which itself, in turn, is driven by the problems thrown up by the working of the markets. He sees the transformation of the economy, he even sees that the changes are linked, but he nowhere examines the underlying forces that are driving these changes.

IV. Conclusions

Where does this leave Hicks in relation to the contemporary horizontalist monetary theory? There are clearly similarities, starting with the determination of employment by effective demand. He also adopts the characteristically Kaleckian distinction between flexible primary prices and largely inflexible (cost-determined) manufacturing and service prices. Hicks sees modern money as Wicksellian credit-money, supplied endogenously by a competitive banking system, with interest rates determined by the central bank.

But there are also significant differences. First, Hicks has a far more comprehensive historical vision; he sees theory as developing in response to changes in actual institutions and market relationships. Monetary theory in particular responds not only to changes but also to policy issues and problems. Second, the question whether money is exogenous or endogenous is a matter of how monetary institutions are actually organized. Whether interest rates are set by the central bank or determined by supply and demand is likewise a matter of how the system actually works. In each case, either is possible. Third, banking is normally a competitive business, but it is one that threatens to become unstable rather easily, so must be regulated and if necessary supported by government. The way this is done in the advanced countries is to have banking presided over by a central bank, which will keep markets orderly, peg the interest rate, and serve as a lender of last resort. But this is a recent development; it was not always so. Horizontalism developed historically.

In this vein Moore (1996) has recently emphasized the importance of institutions and has claimed that the exogeneity/endogeneity debate over money was a matter of different historical periods. But there is still lacking a comprehensive study of how these changes arose out of institutional forces.

On the other hand, the theory of transformational growth (Nell, 1998) explicitly emphasizes some of horizontalism's views of money endogeneity, but also rests these arguments on a careful study of historical institutions and the changes that occur through market pressures. In this way, it can bring together both the views expressed by horizontalists and those expressed by Hicks.

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<국문초록>

통화이론에 관한 힉스의 주안점

심 경 섭

힉스는 오늘날의 금융제도가 케인즈의 화폐이론이나 마샬의 화폐이론이 암묵적으로 가정했던 전제조건을 거의 다 충족시키지 못하고 있다는 점에서부터 논의의 실마리를 풀어가고 있다. 힉스는 마샬의 전제조건으로서는 불가수준의 안전성, 그리고 케인즈가 화폐와 단기증권, 예를 들어 어음을 구별하지 않는 이유는 단기 이자율이 너무 낮아서 양자를 구별할 필요가 없었기 때문이라고 주장하였다.

빅셀이 상정했던 경제체계에서는 화폐현상에서 본질적인 불확실성이나 거래비용과 같은 개념이 존재하지 않는다. 힉스는 바로 이러한 점에 주목하여 빅셀 모형의 기본 사상은 그대로 간직하면서 이를 현대적으로 재해석하려고 하였다. 그리하여 힉스는 빅셀의 모형을 세가지 측면에서 수정 가능하다고 하였다. 제 1차 수정모형은 은행의 정보가 불완전하다는 점에서 출발하였으며, 제 2차 수정모형에서는 저축자의 행위가 관건이 되며, 제 3차 수정모형에서는 정보의 수집에 특화된 다른 금융기관의 존재를 들고 있다. 특히 힉스는 제 3차 수정모형을 각 금융주체가 적당하게 거리를 유지하는 체제라 하였다.