

## J. R. HICKS

### AND HIS VIEW OF STABILITY OF A FINANCIAL ECONOMY

doc. Ing. Magdaléna Přívarová, CSc.

*J. R. Hicks was born in 1904 in Warwick, England, where his father was a journalist on the local daily newspaper. He gained his university degree at Oxford University and his first job was at the London School of Economics (1926 – 1935). At the beginning he taught labour economics, later he began to take an interest in the analytical aspect of economics, where he could employ his talent for mathematics to the full. His interest in economic science developed thanks to discussions with F. von Hayek, R. Allen and*



*N. Kaldor. Over the years 1935 – 1938 he worked at Cambridge, where he wrote his main work *Value and Capital*. He was appointed professor at Manchester University (1938 – 1946) and finally at Oxford (1946 – 1971).*

*In 1972, together with K. J. Arrow, he won the Nobel Prize for economics on the basis of his already-mentioned publication *Value and Capital*, devoted to the economic equilibrium theory, in particular the issue of the stability of equilibrium in an economic system exposed to external shocks.*

The scientific field of interest of J. R. Hicks was however much broader. Hicks was part of a generation of economists who were able to contribute to the development of various fields of economic science. Hicks' work may be broken down into the following thematic fields:

- the theory of wages,
- the theory of value,
- the economy of welfare,
- the theory of money,
- the theory of economic growth.

In 1932 he published *The Theory of Wages*. In this work he elaborated the mechanisms determining real wages, something which at the time was not a very current topic (it being a period of the great economic crisis and the ascent of the Keynesian revolution). The work however deserves attention for two reasons. Firstly due to the fact that in it Hicks proved that in a short period it is not possible to theoretically determine the level of wages: this is determined as the result of the process of collective bargaining and not by a market mechanism.

The second significant moment of the work of *The Theory of Wages* is Hicks' interpretation of demand for labour in the long-term in conditions of incomplete employment. This is the result of two phenomena which are an analogy of the income and substitution effect expressed in an analysis of the demand for goods. A decline in the rate of real wages means a decline in wage costs, which induces increased demand for labour (income effect). Besides this, through the fact

that the relative price of labour falls, the combination of factors of production becomes still less capital demanding, which also leads to an increase in the demand for labour (the substitution effect). Hicks perceives both these effects as disruptive influences, which in the conditions of a higher rate of unemployment slow down the introduction of technical innovations that would enable a return to full employment.

The aim of Hicks' scientific work is clearly indicated by the title of the article published in the journal *Econometrica* in 1937 – *Mr Keynes and the Classics*. The article may be considered as the arrival of neo-Keynesian economics. At the same time it represents a certain stage in the preparation of his main work – *Value and Capital*, which he published in 1939.

This publication represents something of a bridge between Keynes and the theory of general economic equilibrium. In it Hicks re-worked the theory of consumer behaviour, where he used the analytical apparatus of the traditional version of the theory of utility and incorporated into it the term marginal rate of substitution. The neo-classical hypothesis of declining marginal utility was replaced by the much less limiting hypothesis of the declining marginal rate of substitution. This enabled him to study changes in income, which are essential in maintaining a constant utility in order to compensate for changes in the relative prices of products. This phenomenon is known under the term of the Hicks' substitution effect. He used an analogical analysis also for



the field of production, which led him to examine the general economic equilibrium, which for English economists of the time was not too topical.

Similarly as L. Walras, Hicks too was not greatly interested in the conditions of the existence of a solution to the problem of general economic equilibrium – he simply stated that it probably exists, since the number of unknown quantities equals the number of equations. Rather, he concentrated on “laws of change” in this equilibrium, i.e. on the issue of its stability. Hicks introduced into economic theory the term “temporary equilibrium” – that is the state in which current market equilibrium is influenced by future equilibrium and this by means of the anticipations of economic subjects. Through this analysis he gained credit also for introducing the term elasticity of anticipations, which was later taken over by the theory of rational expectations.

Hicks also had numerous articles concerning the economics of welfare, of which the main are the compensation test and the definition of consumer rent.

The compensation test is connected with the relativity of Pareto's optimum. Hicks proposed to solve the problem in the following way: economic policy measures

adopted must be considered as improving the state of affairs as a whole, if those who in consequence of their realisation gain, they may compensate the loss of those who are harmed and despite this find themselves in a more advantageous situation than before.

Hicks reformulated also the problem of consumer rent. He defined it as the difference between the highest price that a consumer was willing to pay for a given good, and the price which he actually pays on the market. He defined similarly also the producer rent: as the difference between the lowest price for which an enterprise is willing to sell its production and the actual selling price.

Over the years 1960 – 1970 Hicks published works from the field of economic growth and the theory of capital. These however did not meet with such acclaim as previous works. In the end years of his life he embarked on a new issue, the new undertaking of writing *A Theory of Economic History*, where he attempted to define certain orientation points, which would enable the birth of the market economy to be correctly interpreted, set in the given technical, cultural and institutional environment.

### The IS-LM Model and its Place in Macroeconomic Theory

Through his article *Mr Keynes and The Classics* Hicks contributed to the neoclassical reinterpretation of Keynes and to the emergence of a neoclassical-neo-Keynesian synthesis. This does not mean that Hicks was a neo-classicist, rather he was an eclectic. He declared of himself that he felt himself to be an adherent of the Marshall theory, but equally of Ricardian, Keynesian or Lausanian economics.

In this article he for the first time also published the IS-LM Model, which A. Hansen later reinterpreted as the IS-LM Model. The aim Hicks was trying to achieve, was to give an as simple as possible graphic depiction of the equilibrium, concurrently both in the market for goods and services, as well as in the financial market. The labour market is not included in his graphic depiction. He considered the securities market to be one of equilibrium, if the first two markets (real and financial) are in balance. The IS-LM Model thus enables the transition from an expense-income model to a model of general economic equilibrium.

Similarly as Walras' general economic equilibrium, so too did the IS-LM Model enable the formalised expression of the economic theory. Nevertheless, in contrast to Walras' scheme, the IS-LM Model enables the direct formulation of a series of economic policy recommendations.

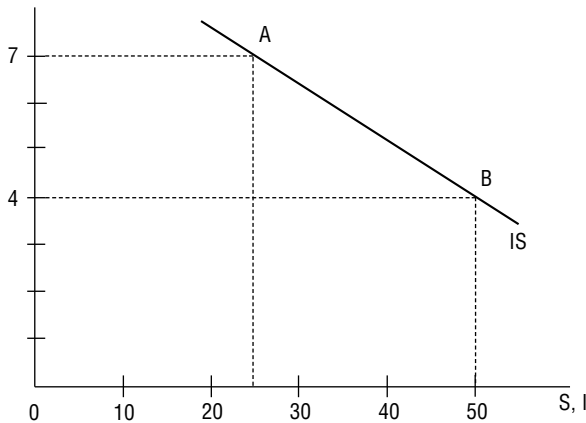
### Equilibrium in the Market for Goods and Services

In the IS-LM Model the following economic variables are considered: consumption expenditures of households (C), investment expenditures of firms, which have an exogenous nature (I), national income (Y), national savings (S), the interest rate (i), the demand for money (L), the money supply, which has an exogenous nature (M).

Investments are a declining function of the interest rate. National savings (similarly as in the case of Keynes) represent the unconsumed part of income. They are thus deemed a residual variable. At the same time however they are considered as a growing function of the interest rate. The independence of investments in relation to savings, which we find in Keynes is disrupted. In Hicks' view both investments as well as savings depend on the interest rate, which can be drawn as the famous curve IS (Figure 1).

Let us assume that the marginal propensity to savings (MPS) is 0.25. Then point A [25, 7] expresses that in the case of income  $Y=100$  savings equal investments and reach the level 25 (i.e.  $0.25 \times 100$ ) and that this equilibrium is achieved at the interest rate 7%. Likewise, point B expresses the situation where at the level of income  $Y = 200$  savings equal investments and reach the level 50 (i.e.  $0.25 \times 200$ ) and this equilibrium is achieved at the interest rate 4%.

Figure 1 The IS Curve



The curve IS then expresses all combinations of the interest rate and national income in the case of which equilibrium in the market for goods and services is achieved.

Hicks thus transformed the interest rate into an endogenous variable of the same nature as income.

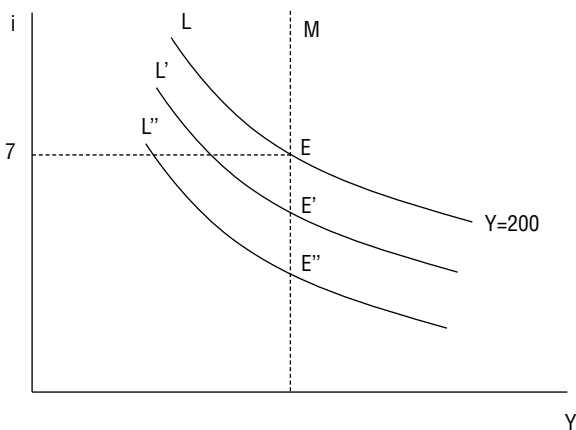
A fall in the interest rate has two contradictory impacts: it causes a decline in savings, but at the same time increases the volume of investments. This means that aggregate demand grows. Thanks to the operation of the multiplier, incomes will also grow and savings will adjust to the higher level, whereby there shall be a return to equilibrium.

A rise in the interest rate, on the contrary, slows down investment and stimulates savings. Aggregate demand is reduced, incomes fall and with them also savings. Again equilibrium is thereby renewed.

### Equilibrium on the Financial Market

Demand for money is a function of the interest rate and income  $L=L(i, Y)$ . It is a declining function –

Figure 2 Equilibrium in the financial market



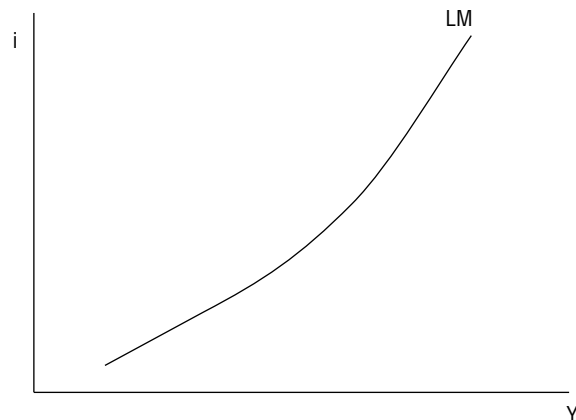
when the interest rate increases, demand for money falls, because the “price of money” is high.

It is thus possible to draw demand curves for money which corresponds to various levels of national income. The supply of money is considered as given, exogenous. Equilibrium in the financial market may be expressed in a formalised manner as:  $L(i, Y) = M$ .

If the level of the money supply is given, then equilibrium in the financial market is established depending on the level of the national income and interest rate. In our example demand for money equals money supply, determined by the central bank at the level of national income 200 and the interest rate 7%.

Points E, E', E" from Figure 2 allow the curve LM to be constructed as a matrix of all equilibriate points in the financial market which express the respective combinations of national income levels and the interest rate.

Figure 3 The LM Curve



So, if the money supply is given, then there exists a certain combination of interest rate and national income in the case of which demand for cash and money supply are equal. This combination corresponds to the respective points on the LM curve. The relationship expressed by the LM curve means that when the national income increases, more money is necessary for realising transactions. This is manifested as the key role of the preference for liquidity, which pushes economic subjects to wanting to have cash money, which enables them to realise their purchases. A barrier is however given by the level of the money supply set by the central bank. Economic money may gain additional transaction money only by selling securities. This leads to a growth in the interest rate.

The higher the income (under the assumption that the preference for liquidity is constant and the money supply is given), the higher the interest rates neces-



sary in order to achieve equilibrium on the financial market.

Hicks in the end connected both markets (the markets for goods and services, and the financial market) into one graph. From the geometric perspective he thus achieved the IS-LM diagram, determining national income and the equilibrate interest rate for a given money supply as well as for a given liquidity preference and level of marginal propensity to consumption.

This graphical depiction has great methodological significance. It enables the essence of financial economics to be understood, where national income features as a variable determining transaction demands for money, and the interest rate, by contrast, features as a variable determining the level of investments. The IS-LM Model thus takes into consideration the main variables which Keynes excluded from the economic system in order to outline its contours.

### Transformation of the Basic Keynes Model

The IS-LM Model is considered as an interpretation of the Keynesian general theory of employment, interest and money. It contains a Keynesian interconnection of the real and financial sector of the economy, which enables the macroeconomic equilibrium to be found. This happens thanks to the forces which are a result of the movement in the interest rate.

And it is precisely here that we can see a marked divergence of Keynes' and Hicks' thinking. According to Keynes, the interest rate depends exclusively on the preference for liquidity and upon the amount of money in circulation. In the economic system it thus features as an independent variable. In Hicks' view however, the interest rate and income are determined jointly by three functions (the consumption function, the marginal efficiency of investments and the preference for liquidity) and by the amount of money. So Hicks transformed the exchange rate into an endogenous variable of the same nature as income. Both variables are determined simultaneously through the interplay of forces which unceasingly operate on the markets. These forces in fact represent the whole plethora of possibilities of the system's self-regulation. They have a great force in the "classical situation".

Hicks, however, draws attention to the fact that the "Keynesian situation" is different: the stated forces for various reasons play their role imperfectly. On the one hand, demand for investments displays low elasticity vis-à-vis the interest rate, which explains the

specific shape of the IS curve. On the other hand, in the case of low interest rates, manipulation with interest rates barely affects demand for money at all, which explains the shape of the LM curve in the zone termed the "liquidity trap", i.e. there where the economy is found in the case of a long-lasting recession and uncertainty. These characteristics prevent auto-regulation of the system. In the area of the liquidity trap a growth in the money supply does not influence either the interest rate, or the volume of investments.

In Hicks' thinking however the "Keynesian situation" is examined only as a special case in a whole number of possible cases. In his view, Keynes' General Theory is only a specific case of the general classical theory. Hicks attempted to prove that Keynes' analysis of macroeconomic equilibrium in the case of unemployment rests on the specific premise of rigid wages. Many economists however have cast doubt upon this interpretation of Keynes and marked it down as a misleading interpretation of the General Theory. In contrast to the neo-classical emphasis on stability of the economic system, one section of the critics drew attention to the uncertainty and the instability ensuing from it, characterises a financial economy, others pointed to the markets, which are not "cleansed" in consequence of their inability to transmit appropriate price signals.

Despite this however, following the end of the Second World War this method of a Keynesian viewing of the financial economy was popularised. The Keynesian-neo-classical synthesis became the basis of macro-economic modelling, national accounting and forecasting works.

In this first synthesis however certain elements are lacking, which are necessary in order for us to be able to put together a whole mosaic of the financial economy. In it the labour market remains, as it does in the case of Keynes, in the background. Incorporation of the labour market into the IS-LM Model was undertaken later by Don Patinkin.

### Literature:

1. Hicks, J. R.: Mr. Keynes and the „Classics“: A Suggested Interpretation. In: Readings in Macroeconomics. Edited by Mueller, M. G., New York 1967.
2. Jonáš, J. a kol.: Oslava ekonomie. Academia, Praha 1994.
3. Iša, J.: Koniec „keynesovskej revolúcie“? Pravda, Bratislava 1985.
4. Sojka, M., Konečný, S.: Malá encyklopédie modernej ekonomie. Libri, Praha 2001.