The distinction between short period and long period is a time-honoured tradition in economics. However, different justifications have been given to the common-sense perception that certain effects persist for longer than others and, accordingly, different authors have ascribed different weight to short-period analysis. For instance, in classical political economy its importance was underrated, in Keynesian economics it was stressed; later, in the neoclassical synthesis, its role increasingly shrank and eventually faded with the advent of the New Classical and neo-Keynesian macroeconomics.

The relevance of short-period analysis is a dividing issue also between neo-Ricardians and post-Keynesians. The former argue that only long-period positions can be made the object of an economic theory, since they are the outcome of permanent as opposed to temporary forces. They argue that while in Ricardo (and in classical political economy) the theory allows the determination of natural or long-period values for prices, profits and wages, in Marshall and, in general, in marginalist authors, long-period values cannot be consistently determined because of an inherent flaw in the theory of distribution based on supply and demand of factors of production. According to this interpretation, the difficulty of determining the normal rate of profit forced marginalist authors to abandon the method based on long-period positions. Short-period analysis is thus seen as a device for getting rid of the assumption of the uniform rate of profit (Garegnani 1976).

On the other hand, post-Keynesians stress the role of uncertainty in a monetary economy in preventing the economy from ever getting into long-run equilibrium; hence the irrelevance and possibly the misleading nature of a method based on long-period positions (Asimakopoulos 1990). Thus, although post-Keynesians provide a reason why short-period analysis should be preferred to long-period analysis, they do not offer an explanation of how this change in approach came about.

In this chapter a rationale is provided of the origin of short-period economics: I argue that it is to be found in the change which occurred from Ricardo - through Marshall and Kahn - to Keynes in what is believed can or cannot be made the object of an economic theory.

In Ricardo's theory a distinction is made between 'permanent' and 'temporary' causes of economic events. A permanent cause is interpreted as a sufficient condition for something to happen: its effects are certain regardless of the time interval necessary for their implementation. Permanent causes are sufficient but not necessary conditions, since the same effects could be brought about by other causes that are said to be 'temporary'; thus, they are neither necessary nor sufficient. They are not sufficient because their effects are not certain, and may well be offset by the working of more permanent forces, and they are not necessary because a given effect cannot be unambiguously imputed to them.

When permanent forces prevail, the value assumed by certain variables, such as prices, rate of profit, wages and the quantity of money, is called by Ricardo their 'natural' value. For instance, a change in the conditions of production of a given commodity is a 'permanent' cause of a change in its price, which means that the price will certainly change, although not every variation in commodity prices can be imputed to variations in the conditions of production. By contrast, a change in demand is a 'temporary' cause of a change in prices, not because its effect does not last long enough, but because it is not certain.

Similarly, when discussing natural wages, Ricardo granted that money wages can be pushed downwards when the supply of labour grows faster than demand, but, he said, if there is at the same time a change in the conditions of production of wage goods, making them more difficult to produce, their money prices rise and the overall effect is an increase, not a decrease, in money wages. The former can be taken as an example of a temporary cause whereas the latter - an increase in the price of wage goods - is a permanent cause of wage increases (Rosselli 1985).

Ricardo's definition of the natural quantity of money is given by analogy with the definition of natural wages and natural prices. The quantity of money is at its 'natural' level whenever the market price of the standard shows no deviation from the official price, that is to say whenever the purchasing power over the standard is kept constant. If gold is the standard, the quantity of money is kept at its natural level by a market mechanism; an increase in the quantity of money immediately lowers the exchanges, making the purchasing power of the standard in terms of the domestic currency higher abroad than at home, thereby making the export of gold profitable. The ensuing reduction in the quantity of gold brings the quantity of money back to its natural level.

Thus, changes in the quantity of money involving changes in its purchasing power in terms of gold at home and abroad are 'temporary', because market mechanisms will bring the quantity of money to its natural level, thereby restoring the equality of the purchasing power of money at home and abroad. Changes in the quantity of money deriving from a change in the conditions
of production of gold, on the other hand, are permanent, because they cause a change in its natural level.

The question in Ricardo’s theory is, then, not one of measuring ‘for how long’ or ‘to what extent’ an observed consequence follows from a given cause, before deciding whether it is a short- or a long-run effect. The question is one of deciding which causes can be made the object of a theory, namely whether from a given cause consequences can be derived which are certain.

To Ricardo, the distinction between short and long run pertains to the question of which causes are eligible to become part of a theory, and not to the question of which effects endure or fail to endure. Ricardo takes permanency as a property independent of the length of time during which causes exercise their influence because the definition of a permanent cause is given not by the length of the duration of its effects but by its place in the structure of the theory.¹

MARSHALL

Marshall presented his theory as an ‘improvement’ over Ricardo’s theory and not as a change of approach.² However, the continuity is far from obvious. First, there is a change in terminology, in itself revealing of a change in meaning, from the use of ‘natural’ to that of ‘normal’ values. Second, for the classical authors, natural value, as opposed to what they term ‘market value’, is interpreted as the ‘average value’ which would prevail in a stationary state (Marshall 1964: 289). Marshall’s criticism is that it is a ‘fact that the general conditions of life are not stationary’, the reason being that ‘we cannot foresee the future perfectly. The unexpected may happen; and the existing tendencies may be modified before they have had time to accomplish what appears now to be their full and complete work’ (ibid.). Therefore something different from the method employed by the classical authors must be envisaged. It follows that ‘it is to the persistence of the influences considered, and the time allowed for them to work out their effect’ that we should refer ‘when contrasting Market and Normal price’ (ibid.). Marshall asserts that ‘the term normal implies the predominance of certain tendencies which appear likely to be more or less steadfast and persistent in their action over those which are relatively exceptional and intermittent’ (ibid.: 28).

The contrast with Ricardo’s approach is clear. It is apparent that Marshall’s distinction aims to qualify causes according to the persistence of their effects in time, whereas Ricardo’s aims to single out causes which can provide a sufficient explanation of given effects. For Marshall it is the persistence in time of a known cause which is the criterion for attributing the term ‘normal’ to the value assumed by a given variable, but for Ricardo it is the certainty of their effects that leads to identification of those causes which are responsible for ‘natural’ values.

Since the purpose of economic analysis is, according to Marshall, to

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determine the ‘immediate and ultimate effects of various groups of causes’ (Whitaker 1975: 97) through an accurate study of the element of time, the distinction between short and long period is derived not from the nature of the forces determining observed effects, but from the length of time necessary for the same forces to work their effects. Since the forces which govern the economic system are supply and demand, the crucial factor becomes ‘the period of time which is allowed to the forces of demand and supply to bring themselves into equilibrium with one another’ (Marshall 1964: 274).

Producers adapt the level of production to expected demand if, and only if, the expected supply price is sufficient to make it worthwhile to produce that quantity. The price ‘the expectation of which is sufficient and only just sufficient’ (Marshall 1964: 310) to produce that quantity is the ‘normal’ supply price. Given his definition, not surprisingly Marshall applies the term ‘normal supply price’ equally to the short and to the long period (ibid.), the only difference being that in the long period ‘supply means what can be produced by plant, which itself can be remuneratively produced and applied within the given time’ (ibid.: 315).

In conclusion, the distinction between short and long period is based on the nature of the decisions involved, which reflects what individuals take as given and what they expect in different periods of time. He wrote:

For short periods people take the stocks of appliances of production as practically fixed; and they are governed by their expectations of demand in considering how actively they shall set themselves to work those appliances. In long periods they set themselves to adjust the flow of these appliances to their expectations of demand for the goods which the appliances help to produce.

(Marshall 1964: 310–11)³

It is the nature of the decisions involved, characterized by the time horizon to which they apply, that sets the boundary between the long and the short period. Accordingly, economic theory can take as constant those factors over which decision can be postponed and take them as variables only when describing situations in which they are a matter of decision by economic agents.

KAHN

The economist who perhaps more than any other was concerned with giving a precise definition of short period was Richard Kahn, who chose as the title of his Fellowship dissertation, ‘The economics of the short period’.⁴ Although the dissertation turned out to be more concerned with imperfect competition, we find in it the building blocks of what a few years later Robertson, was to refer to, in a letter to Keynes, as ‘your and Kahn’s [short] period method’ (Keynes 1979: 17).
From Marshall’s definition of short period – as the situation in which machinery and the organization of production are assumed to be constant – Kahn drew a further implication. The possibility of considering them as constant from the point of view of the short period arises from the fact that in both cases the decision to alter them is the same and depends on whether demand conditions or are or are not considered ‘normal’. Accordingly, depending whether changes in demand are believed by entrepreneurs to be transitory or permanent, as compared with the level considered as normal, the decisions to modify the plant or the organization will or will not be taken.

Although short period cannot be ‘shorter’ than the length of the productive process or longer than the time necessary to modify productive capacity, the time necessary to modify productive capacity depends not only on technological factors, but also on prevailing conditions – depression or boom – which mould expectations regarding the return to ‘normal’ conditions of demand. The point of Kahn’s dissertation is to prove that an equilibrium at less than full capacity may arise, in the event that the fall in demand is not expected to last, when the market is imperfect (Marcuzzo 1994).

In the following two or three years – when the ‘multiplier’ was also developed – Kahn presented his thoughts on short-period economics in a book bearing the same title as the dissertation, which, however, remained unfinished and is still unpublished.5

The nature of the short period is seen not as a conceptual experiment but as a question of fact, namely that the life of fixed capital is considerably greater than the period of production (Kahn 1932: ch. 2, p. 2; 1989: xiii).

If there were a complete range of continuous variation in the lives of the different means of production, the notion of short period could not be employed. But, in reality, as far as the range of variation is concerned:

Between raw materials, on the one hand, and productive plant, on the other hand, there is a desolate and sparsely populated area. As a general rule, the life of physical capital is illustrated either by the mayfly or by the elephant.

(Kahn 1989: xiii)

One aspect of the rationale for an ‘economics of the short period’ is, therefore, rooted in the nature of the production process, which gives meaning to a time interval where productive capacity is given and only its utilization varies. In fact, there are changes that occur rapidly (such as output and employment) and others that occur only slowly (such as alterations in fixed plant) (Kahn 1932: ch. 2, p. 6).

The other aspect characterizing the short period is rooted in expectations of changes in demand relative to the level perceived as ‘normal’. The level of demand which individuals take as ‘normal’ is the benchmark against which observed variations are evaluated and expectations about its future course are formed.

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The two aspects are combined to explain why in the short-period productive capacity is not altered. This is so because a change in the conditions of demand is not perceived as permanent. In fact, the ‘ideal’ short period is defined as a situation where ‘any change that occurs is not expected to be permanent’ (Kahn 1932: ch. 2, p. 10). In a depression, however, short-period equilibrium implies expectations that demand will return to its normal level, since suspending production or reducing the productive capacity to zero would require the belief that demand continued to be permanently low. In a boom, by contrast, short-period equilibrium implies that expectations are such that an increase in production is preferred to building up capacity until the increase in demand is perceived as ‘permanent’.

Since what matters are expectations about the normal values of certain variables, in particular the level of demand, it follows that the short period need not be a ‘short’ time interval or only a temporary state before the long-period forces work out their effects. It is rather a position which is maintained as long as the set of decisions, depending upon the expected values of selected variables, does not change (Dardi 1996).

When the demand for an industry’s output alters, according to Kahn, there are changes where responsiveness is immediate and changes where responsiveness is slow, but there is no continuous range of variation between ‘responsiveness’ and ‘irresponsiveness’. Changes that occur rapidly (output and employment) ‘do not very much depend on what has occurred in the past or what is expected to occur in the future’ (Kahn 1932: ch. 2, p. 12). They are irreversible changes as opposed to changes ‘which by definition have not time to occur in the short period [and which] depend on what has occurred in the past and what is expected to occur in the future’ (ibid.).

In conclusion, according to Kahn, we have causes which have different effects according to whether they are perceived by economic agents as permanent or persistent on the basis of what is believed to be the normal value of a given variable. However, if what matters is the divergence between the expected and the ‘normal’ values of selected variables, the crucial question becomes whether one still needs a theory to explain how these normal values are determined or whether we can take them as being characterized simply by their repetitiveness.

KEYNES

Keynes further developed the short-period approach with the more general purpose of developing economic theory in order to explain decisions taken under different conditions of knowledge. Different conditions of knowledge reveal themselves in what individuals take as ‘normal’ in any given situation.

In a departure from Ricardo, economic theory is asked to capture the effects of decisions taken in an ‘uncertain’ environment and provide an explanation not of ‘permanent causes’, but of ‘motives, expectations,
psychological uncertainties’ (Keynes 1973a: 300). Thus, whereas for Ricardo the predictive power of the theory is enhanced by severely limiting its domain, in Keynes – since ‘the material to which it [economics] is applied is, in too many respects, not homogeneous through time’ (ibid.: 296) – it is the search for permanent causes which is severely limited. In fact, according to Keynes:

The object of a model is to segregate the semi-permanent or relatively constant factors from those which are transitory or fluctuating so as to develop a logical way of thinking about the latter, and of understanding the time sequences to which they give rise in particular cases.

(Keynes 1973a: 296–7; my emphasis)

In a famous letter he then added:

One has to be constantly on guard against treating the material as constant and homogeneous. It is as though the fall of the apple to the ground depended on the apple’s motives, on whether it is worth while falling to the ground, and whether the ground wanted the apple to fall, and on mistaken calculations on the part of the apple as to how far it was from the centre of the earth.

(ibid.: 300)

Whereas for Ricardo the aim of scientific enquiry is the search for permanent causes from which general laws can be derived,9 the object of economic theory for Keynes is to develop a logical way of thinking about factors which are ‘transitory and fluctuating’, because they are the material to which economics must be applied.

The role assigned to expectations in The General Theory is to explain the possibility of an equilibrium at less than full employment. This equilibrium is not described as a situation characterized by ‘wrong’ expectations since ‘the theory of effective demand is substantially the same if we assume that short-period expectations are always fulfilled’ (Keynes 1973a: 181). Thus, the short period is not a situation where expectations are not fulfilled, but a situation in which expectations generate ‘a state of things’ (Dardi 1994) which conforms to it.

It follows that Keynes’s approach to the distinction between short period and long period is radically different from the line taken later in macroeconomics by both monetarist and New Classical economists.

Friedman explains short-run fluctuations in output and employment as being due to ‘wrong’ expectations about the true level of inflation, arising from asymmetric information on the part of workers. This led to the well-known criticism by Lucas – the impossibility of sustained error – and therefore to the need to adopt a ‘rational’ mechanism of expectation formation. This criticism, however, did not lead to a change in the justification for the distinction between short- and long-run effects. Abandoning the argument based on wrong expectations in favour of unanticipated or non-

credible economic policy simply meant shifting the burden of the informational asymmetry from the workers, vis-à-vis the entrepreneurs, to the public, in general, vis-à-vis the policymakers. The overall implication remains the same: short period means temporary effects and long period means permanent effects.

CHANGE IN METHOD

In order to illustrate the switch in the distinction between short and long period, it may be useful to compare the change in approach to monetary theory between Ricardo and Keynes, brought about by a change in method.

It is common opinion that Ricardo’s theory represents the position according to which money is neutral; that is, variations in the nominal quantity of money have an effect on nominal variables, but only in the short period on real variables. Thus Ricardo is seen as the champion of the quantity theory of money and of long-period analysis.

If the quantity theory is interpreted as the proposition that a necessary and sufficient condition for a change in money price is a proportional increase in the money supply, it is certainly true that Ricardo never thought that any variations in prices necessarily implied a variation in the quantity of money.

In other words, whereas the quantity of money always affects prices, variation in the quantity of money is not a necessary condition for a variation in prices. Price increases may just as well be caused by a decrease in the value of the standard, a rise in wages or tax increases. In fact, Ricardo advocated a policy of reduction in the quantity of money only in case of depreciation measured in terms of gold, and never in the case of an increase in prices, as we would expect if he held the strict quantity theory.

But is the change in the quantity of money a sufficient condition for a proportional change in money prices? The only proportionality factor to be found in Ricardo lies between the quantity of money and the price of gold, since any increase in the quantity of money above the natural level brings about an exactly equal decrease in its purchasing power in terms of gold.

As a consequence, but only as a consequence of this proportionality, if the relative values of commodities in term of gold are assumed to remain constant, then the monetary prices of commodities vary in proportion with the quantity of money. But if the relative values of commodities vary, for instance because there is a change in the conditions of production, then the proportionality between variations in prices and variations in the quantity of money disappears.

Thus, the non-neutrality of money in the short period conceived by Ricardo cannot be interpreted as a temporary effect, namely as something which is not destined to last. Rather, it should be interpreted as an uncertain effect because, in the absence of a theory to deny the validity of Say’s identity, the level of output is given. Alternatively, the non-neutrality of money in the short period
should be interpreted as an effect which is offset by others deriving from a permanent cause. This is why temporary causes cannot be part of the theory: not because their effects are not recognized as part of reality, but because their effects are uncertain and volatile and can be offset by more certain and permanent ones (Marcuzzo and Rosselli 1994).

Keynes's approach is radically different. The quantity theory of money is first criticized in the Treatise on Money for being 'ill-adapted' for the purpose of exhibiting 'the causal process by which the price level is determined, and the method of transition from one position to another' (Keynes 1971: 120). The content of the theory is definitively rejected with the writing of The General Theory, where it is finally substituted by the liquidity preference theory (Kahn 1984); there the 'normal' interest rate is presented as exhibiting a 'conventional' nature, meaning that it is governed by the prevailing views as to what its particular value is expected to be.7

The liquidity preference, the propensity to consume, the marginal efficiency of investment, the wage unit and the quantity of money are presented by Keynes as the 'ultimate independent variables' of his theory. He denies, however, that the distinction could ever be general; on the contrary, the division is said to be quite arbitrary from any absolute standpoint (Keynes 1973b: 247).

Keynes's point is that there are no grounds for ascribing necessity and generality to the distinction between causes, because this distinction is contingent on particular, ever-changing circumstances. He wrote:

The division must be made entirely on the basis of experience, so as to correspond on the one hand to the factors in which the changes seem to be so slow or so little relevant as to have only a small and comparatively negligible short-term influence on our quiescent; and on the other hand to those factors to which the changes are found in practice to exercise a dominant influence on our quiescent.

(Keynes 1973b: 247; my emphasis)8

The reason why in economics 'we cannot hope to make completely accurate generalizations' (ibid.) is because the economic system is not ruled by 'natural forces' that the economist can discover and order in a neat pattern of causes and effects. The task of economics is rather to 'select those variables which can be deliberately controlled and managed by central authority in the kind of system in which we actually live' (ibid.).

The General Theory explains why the level of employment oscillates around 'an intermediate position' below full employment and above the minimum subsistence employment (Keynes 1973b: 254). However, Keynes adds:

we must not conclude that the mean position [of employment] thus determined by 'natural' tendencies, namely, by those tendencies which are likely to persist, failing measure expressly designated to correct them, is therefore established by laws of necessity. The unimpeded rule of the above conditions is a fact of observation concerning the world as it is or has been, and not a necessary principle which cannot be changed.

(Keynes 1973b: 254; my emphasis)

My conclusion is that the change in method from Ricardo initiated by Marshall9 (normal values as average occurrences rather sufficient causes), continued by Kahn (values expected or believed to be normal) and pushed further by Keynes (normal as conventional) meant giving pre-eminence to short-period economics, with far-reaching consequences for economic theory and economic policy. This may explain why neo-Ricardians and post-Keynesians are still divided on this issue.

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NOTES

1 The sections on Ricardo draw on work I did jointly with A. Rosselli (see Marcuzzo and Rosselli 1994).
2 'The foundations of the theory [of value] as they were left by Ricardo remain intact; ... much has been added to them, ... must has been built upon them, but ... little has been taken from them' (Marshall 1964: 417).
3 Marshall provides a rough measure of the length of the periods: short period is measured as 'a few months or a year', and long period is referred to as 'several years' (Marshall 1964: 314-15).
4 The dissertation was written between October 1928 and December 1929. It was first published in Italian in 1983 and in English only in 1989. Kahn was elected a Fellow of King’s College, Cambridge, in March 1930.
5 Of the eleven planned chapters, on the evidence of the contents list, chapters 1, 3 and 4 remained unwritten, and chapter 7 was left unfinished. The extant copy, which was found among Kahn’s papers in King’s College archives, can be dated to the last quarter of 1932 (Marcuzzo 1996).
6 In a letter to Malthus of 4 May 1820, Ricardo wrote, 'My object was to elucidate principles, and to do this I imagined strong cases, that I might show the operation of those principles' (Ricardo 1955: 184).
7 The switch in meaning — 'normal' interpreted as 'conventional' — has been interpreted as an instance of Keynes's previous rejection of the 'principle of the uniformity of nature' (Carabelli 1991) presented in the Treatise on Probability.
8 The *questium* is ‘what determines in any time the national income of a given economic system and (which is almost the same thing) the amount of its employment’ (Keynes 1973b: 247).

9 The point that Marshall is the true initiator of the change in method is stressed also by De Carvalho (1990).

REFERENCES


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