OXFORD JOURNALS
OXFORD UNIVERSITY PRESS

Imperfect Competition, Aggregate Demand and Inflation

Author(s): Roy Harrod

Source: *The Economic Journal*, Mar., 1972, Vol. 82, No. 325, Special Issue: In Honour of E.A.G. Robinson (Mar., 1972), pp. 392-401

Published by: Oxford University Press on behalf of the Royal Economic Society

Stable URL: https://www.jstor.org/stable/2229944

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at https://about.jstor.org/terms

Royal Economic Society and *Oxford University Press* are collaborating with JSTOR to digitize, preserve and extend access to *The Economic Journal*

JSTOR

This content downloaded from 149.10.125.20 on Tue, 18 Jan 2022 13:55:01 UTC
All use subject to https://about.jstor.org/terms

IMPERFECT COMPETITION, AGGREGATE DEMAND AND INFLATION

I CANNOT compose my mind in relation to what I intend to write without first referring to Austin Robinson, in whose honour this special edition of the ECONOMIC JOURNAL, which he edited for so long, is issued. Firmly based on economic theory, as conceived by Alfred Marshall, Pigou and, through Keynes, onwards, he has worked mainly in the field of applied economics. Here he has shown a very great realism as regards how things actually operate, and an understanding of what is important. In this combination of theoretical expertise and realism, Austin might be reckoned, always subject to Keynes, as having first place among the British " political economists " of our generation.

The title of this paper appears to comprise a job lot of disconnected concepts; one might think that it provided appropriate subjects for three separate articles rather than the theme for a single article. It is the purpose of what follows to concentrate on the interconnection of these concepts. In my own early efforts to develop a theory of imperfect competition, my leading motive was to give a better basis for theories of aggregate demand and inflation. It was the provision of this better basis that seemed to me to be the most important function of the theory of imperfect competition. A historic retrospect will be needed.

Perhaps I may be forgiven if the ego figures rather prominently in the narrative that follows; I must make due apology for this. My object is to ensure the greatest possible clarity for the central points. An attempt to give an accurate account of the contributions and mutual influence of the distinguished economists who were at work on these subjects, in what Professor Shackle has called the " Years of High Theory," and, indeed, before that, would entail very lengthy research, and its results would require a volume rather than an article.

I may begin by going back to Keynes' advocacy of public works, which started in the early 'twenties. Many younger economists at that time were influenced by his thinking and keen supporters of his proposals. His main objective was to reduce the unemployment, which continued, without much intermission, to run at a very high level in this country during the 'twenties, and at one considerably higher than obtaining in most other countries after they had recovered from the severe slump of 1920/21. Keynes thought that monetary policy could not by itself cure this malady.

There were various objections to his proposals. There was one that I should like to get out of the way, because it is not central to the theme of this article; but it ought to be mentioned, in order to prevent confusion. This objection was what was known at the time, rightly or wrongly, as the

This content downloaded from
149.10.125.20 on Tue, 18 Jan 2022 13:55:01 UTC
All use subject to https://about.jstor.org/terms

" Treasury View." This view was based on there being a fixed amount of loanable funds. If the Government drew upon a part of this in order to finance public works, correspondingly less would be left for private enterprise; accordingly the extra amount of employment given by the Government would be exactly balanced by a reduction of employment given in the private sector. Thus no good would have been achieved. This doctrine was first cousin to, or even, if we define our terms in a certain way, identical with, the Wages Fund theory of the early classical economists.

The spokesmen of the British Government were still maintaining this stance at the World Economic Conference of 1933. They said that the British had tried public works and found that they had no effect on unemployment. I believe that the authorities remained of this view right up to the Second World War. There was, it is true, a loan not long before the war of £80 million for stepping up defence expenditure, as was felt to be necessary at that time. This was chronologically coincidental with a certain increase of unemployment following on the world recession of 1937/8. It may be that this loan expenditure represented a certain softening of view on the part of the authorities. An alternative explanation is also possible, namely the usual reluctance, which exists at all times, to adopt the unpopular measure of stepping up taxation. There was an aura of respectability about a loan for defence purposes which there would not have been about a loan for building roads, etc.

There was another and different strand of thought in the 'twenties, which gave rise to anxiety, namely fear that a Keynesian expansionary policy might have inflationary effects. It was not the idea that the extra employment hoped for would be solely that due to the public works themselves. It is true that at this time Lord Kahn's famous Multiplier theory had not yet been formulated; but there was in the 'twenties what one might call an embryonic form of it. It was certainly hoped that the extra employment initially due to the public works would lead to extra employment over a wider range. Might this tend to cause inflation? Some of us felt that these fears were exaggerated, since there was plenty of spare capacity in the economy, and expansion could go a long way before the economy became what we now call " over-heated." The matter was rather perplexing.

Then, at around this time, came the classic article by Piero Sraffa (ECONOMIC JOURNAL, 1926), which demonstrated that firms working in competition must be subject to decreasing returns of scale and that increasing returns could exist only in cases of monopoly. While Sraffa's reasoning was impeccable, his conclusion seemed to be paradoxical and unrealistic. Was the general run of British industry at that moment really subject to short-period decreasing returns to scale?

It was in view of these perplexities that around this time I undertook a little field-work of my own. (This must be distinguished from the more systematic investigations made by the Oxford Economists Research Group

This content downloaded from
149.10.125.20 on Tue, 18 Jan 2022 13:55:01 UTC
All use subject to https://about.jstor.org/terms

in the 'thirties.) I went to both large and small firms. The universal answer was that they were not working to decreasing returns to scale, that, on the contrary, an increase of demand and turnover would reduce their costs, that they would certainly not put up their prices in the event of such an increase occurring and might well feel able to reduce them. None of these firms were monopolistic in any ordinary sense of that word.

I accordingly set myself to write an article of a theoretical kind, which purported to resolve the conflict between Sraffa's conclusion on the one hand and what I had learnt from my field-work on the other. This article was written in the summer of 1928 and submitted to Keynes for inclusion in the ECONOMIC JOURNAL. He turned it over to Frank Ramsay as referee. Ramsey made various objections, and the article was rejected. I was deeply distressed. I had known Ramsey for a considerable time, and was aware of the high regard in which Keynes and others rightly held him as an economic theorist; he was also a good friend of mine. I was rather knocked out; I was under pressure, both as Junior Censor and Tutor of Christ Church, and also, in those far-off days, a heavily burdened examiner for and " awarder " of School Certificates. And so I did not take the matter up with Ramsey for more than a year. Then I expostulated with him. I had in reply a deeply apologetic letter—which I preserve—saying that I was quite in the right, and that he was in the wrong.

Accordingly, the article was published in the June 1930 issue of the ECONOMIC JOURNAL. I followed it up with a further paper (" The Law of Decreasing Costs ") and with some supplementary notes.

Meanwhile Professor Joan Robinson was working independently on this subject. I recall receiving a rather formal visit by her and Lord Kahn in Kensington to inquire if I was in the course of writing a book on the topic. I replied that I thought it more appropriate for an article or two, rather than for a book. Of course I was quite wrong, and out of date. Perhaps I was influenced by my former mentor, F. Y. Edgeworth, who after his slim volume on Mathematical Psychics (1890) had published his seminal views in article form. More generally, extensive publication was rather severely discouraged in Oxford in those days; in this it was unlike the more progressive Cambridge.

However, it may be appropriate to say that Austin Robinson, whom we are now honouring, has, although a Cambridge man—I have not been able to find any possibility of an Oxford link or influence—made many of his highly distinguished contributions to economics in the form of articles.

As it turned out, it did not matter whether I was right or wrong about not writing a book, since Professor Joan Robinson was busy on her classic volume. At the same time, of course, Chamberlin was independently working on his volume, which embodied partly, but not wholly, similar ideas.

As I have alread said, my interest in imperfect competition was motivated by problems connected with Keynes' expansionist policies. The point

This content downloaded from
149.10.125.20 on Tue, 18 Jan 2022 13:55:01 UTC
All use subject to https://about.jstor.org/terms

was that, if increasing returns to scale were consistent with short period equilibrium and fairly widely prevalent, and if the economy was working below full capacity, expansion need not cause inflation. This, if correct, is relevant today (1971). Owing to modern specialisation there may be some tendency for those working on the " theory of the firm " to be different in person from those working on theories of full employment and growth.

After the publication of the two famous volumes (Joan Robinson and Chamberlin) I wrote what was tantamount to a review article or exposé of them (" Doctrines of Imperfect Competition," *Quarterly Journal of Economics*, May 1934). In the third part of this article, I explained how imperfect competition theory and trade cycle theory were interconnected.

> " It is only possible to speak very briefly of the importance of these doctrines ' (imperfect competition) ' for trade cycle theory. I believe this importance to be of the first order, but I shall confine myself to indicating the lines along which more elaborate explanation might be undertaken. Ultimately, trade cycle theory is connected with the conditions which determine the equilibrium of the level of output as a whole, in contra-distinction to the particular equilibria of each industry, which are determined by the demand and cost conditions of each. In a recession many particular disequilibria may be set up, but the leading characteristic is a general running down of activity. It is the failure to understand precisely what factors determine this general equilibrium of output as a whole that is also responsible for perplexities concerning movements away from it or changes in it. The key which the doctrines of imperfect competition provide for solving the mystery is that in long period equilibrium industries may be subject to the law of decreasing costs (in the long *and* short periods)."

To me this seemed to be the seminal feature in the new theories of imperfect competition.

Accordingly, I was rather disappointed by the fact that, when Frank Knight had copies of my article made for distribution to his seminar in Chicago, he omitted part three of the article. He had failed to pick up what had seemed to me to be the all important point.

In this article I accepted a certain very central doctrine that was common to Robinson and Chamberlin. I was deeply impressed that these two distinguished authors had independently reached the same conclusion. This may have prevented my bringing such critical faculties as I had to bear upon it. A critical analysis would have required very heavy intellectual labour. The doctrine in question is the tendency towards excess capacity and an undue multiplication of firms under imperfect (and monopolistic!) competition. Is it conceivable that the authors, as often happens, even with the most illustrious writers, were somewhat influenced by the fact that at that particular time most firms were working below capacity and that probably in many industries there were too many firms?

This excess capacity is something additional to, and super-imposed upon,

This content downloaded from
149.10.125.20 on Tue, 18 Jan 2022 13:55:01 UTC
All use subject to https://about.jstor.org/terms

what might also be called " excess capacity " whenever there are increasing returns to scale, namely the fact that in those conditions each plant is not used to its optimum capacity (short period) and each plant—subject to exceptions, of course—is constructed on a less than the optimum scale (long period). The relation between these short-period and long-period phenomena may be represented by an envelope curve (cf. my article " The Law of Decreasing Costs," ECONOMIC JOURNAL, December 1931). This curve was also published by Jacob Viner, not in consequence of his own thinking, but because his " draughtsman " insisted that the long- and short-period curves must be thus related. Being at Oxford, I had no draughtsman!

There is an important difference between these two kinds of excess capacity. An expansion of demand for some broad type of product would, in the absence of countervailing forces, cause its producers to use their plants more fully (short period) and cause them also, if the rise in demand was expected to be maintained, to plan plants of greater size (long period). Thus there would be a decrease in short- and long-period marginal (and average) costs. Cost due to excess capacity in this sense would be reduced by the increase of demand.

The Robinson–Chamberlin doctrine asserted that, although existing firms could meet the rise in demand at lower cost, yet, because they would continue for the time to charge prices giving supernormal profit, new producers would come in until profit was reduced to " normal," and the excess capacity in this sense would then be as great as it had been before the rise in demand. Thus in the long run this rise would not cause an abatement of costs and prices. This was contrary to the view that a sustained rise in demand would tend to reduce costs in conditions of imperfect competition and probably prices also.

In an article published in *Economic Essays* (Macmillan, 1952), but not elsewhere, entitled " Theory of Imperfect Competition Revised," I gave my reasons for rejecting outright the idea that imperfect competition would normally tend to generate the Robinson–Chamberlin kind of excess capacity. The doctrines of imperfect competition have an important role in my book on the *Trade Cycle* (Oxford Press, 1936); thus my sense of the importance of the interconnection of imperfect competition and trade cycle theory continued.

In those days we were still thinking a great deal about the trade cycle. I think that it was the *General Theory* that shifted the emphasis in this regard somewhat. In that volume Keynes was not so much interested in oscillations as in more general causes that determined aggregate demand and thereby an equilibrium level of employment and unemployment. It is quite unnecessary for me here to refer to his themes which have had such a profound influence on economic thinking ever since. He was, however, never much interested in the doctrines of imperfect competition. The question of the

This content downloaded from
149.10.125.20 on Tue, 18 Jan 2022 13:55:01 UTC
All use subject to https://about.jstor.org/terms

possible effect of a Keynesian expansionist policy on inflation I will touch on presently.

Meanwhile I should like to mention another article by me—this will be my last personal reminiscence—which was written at almost the same time as the exposé of imperfect competition doctrine to which I have just referred: "The Expansion of Credit in an Advancing Community" (*Economica*, August 1934). There is the question of full employment and the level of aggregate demand at a given point of time; there is also the question of the growth rate of the economy. The last-mentioned article was my first essay in dynamic (or growth) theory. The article was concerned with money, and the theme was a discussion about whether we should aim at having stable prices or prices falling at the same rate as productivity was rising. The article was provoked, I believe, by a monetarist red herring that had recently been drawn across the path by Dr. F. A. von Hayek. (Not as large a monetarist red herring as has recently been drawn by Professor Milton Friedman.) I was convinced that the debates that had been provoked by the red herring between Keynes, Dennis Robertson, von Hayek, etc., could not be settled by reference to a static condition; it was needful to make an analysis against the background of a growing economy. I was not altogether convinced that Keynes, great debater and great economist as he was, had decisively refuted von Hayek; nor the other way round, of course. My article discussed continuing "technological advance" as its labour-saving and capital-saving variants.

There were certain shifts of emphasis in thinking during the 'thirties. Those in favour of expansionist policies ceased to be nagged by the fear that these might raise prices. They wanted them to raise prices! Thus the whole question of the incidence of imperfect competition on the possible course of prices became less important in relation to the practical situation confronting the world. During the great slump prices had fallen so far as to give the rentier elements in the economy a large bonus and indeed wage-earners also. If a rise in prices had come at all quickly at that time it does not seem likely that it would have triggered off a wage–price spiralling. By and large the general level of prices was below what could have been regarded by any criterion as an equilibrium level. It was against this background that Keynes did not go very fully in the *General Theory* into the dangers of price inflation.

I have already referred to the Oxford Economists Research Group, which was devised originally by Hubert Henderson and was making more systematic investigations into price fixing by business men. (It was also concerned with the effect of variations in the interest rate on decisions.)

I believe that I am right in saying that the impression gained from the testimony of the practical businessmen, of whom a considerable number were interviewed, was that the relevance of the marginal revenue curve,

This content downloaded from
149.10.125.20 on Tue, 18 Jan 2022 13:55:01 UTC
All use subject to https://about.jstor.org/terms

which had figured so prominently in the recently evolved doctrines of imperfect competition, was in danger of being exaggerated. Readers should be reminded of the fact that it was Austin Robinson who coined this excellent expression (" marginal revenue ") which has proved so useful to teachers around the world.

What became plain was that marginal revenue was a value that was almost always entirely unassessable by those engaged in practical business. It was very difficult to explain to some of the interviewees what the expression meant; when they did understand what it meant, they entirely repudiated the idea that it was a concept that they ever used in fixing prices or determining their level of output. So the question must arise whether it is appropriate to develop a theory of output and prices by using a concept, the value of which is hardly ever measurable, even approximately. There are considerable difficulties also about measuring marginal cost. Some theorists may argue that, even although these values cannot in practice be measured, there must be some tendency, by trial and error, for output and prices to be fixed in accordance with them. This argument is not a very safe one. Anyhow, a fairly sharp distinction ought to be drawn between a theory that says that operators will tend to be guided by values that can be measured—if the theory is right in principle and workable in practice it is fairly safe—and the case where operators are supposed unconsciously to approximate to the theoretical solution by trial and error. The account by operators of what they usually actually do should be given greater weight than the theory concerning what they ought to do.

Another defect in the theory is that in adopting a certain price-fixing policy, operators should use a *long* period marginal revenue curve. They clearly ought not to fix prices now in a way that will damage their long-run prospect. If the short-period marginal revenue curve is extremely difficult to evaluate, it may be said that the long-period marginal revenue curve is impossible to evaluate, owing to uncertainty. One could, I suppose, use the concept of the most probable outcome—once again reference should be made to Professor Shackle, who has propounded the difficulties where the assessed outcome is a wide spectrum of possibilities—but this makes the whole matter still more nebulous.

It cannot be said that there was agreement among the businessmen about how they did fix prices and output; there was not even a strongly predominant view. The one which would probably have attracted most votes was the one which—subject to many exceptions, of course—has come to be called the full cost principle. Prices would be equated to direct cost plus a proportionate share of overhead costs plus some standard rate of profit. The share of overhead cost would be determined by some such assumption as the use of 80% of capacity. Other procedures were also described.

But, running across the variety of opinions and possible methods of price fixing, what I have regarded as the most important contribution of

This content downloaded from
149.10.125.20 on Tue, 18 Jan 2022 13:55:01 UTC
All use subject to https://about.jstor.org/terms

imperfect competition theory remained, namely that it was quite common and, indeed, usual for the producers to be operating in conditions of short-period (and long-period) increasing returns to scale. Our suspicion that there must have been something irrelevant about Sraffa's conclusion was fully vindicated. The group included among those whom it interviewed many who, in any ordinary sense of the word, were in fully active competition.

It may be suitable to consider these basic trends in relation to contemporary problems and to the research required for their solution. Tradition of the best economics since the days of Adam Smith and Ricardo has been a nice blend of pure theory and realistic relevance.

I have touched on the development of the theory of imperfect competition, as distinct from the older theories of competition, which have now to be split into those pertaining to perfect and those pertaining to imperfect competition. Then there has been some modification of the way in which the pure concept of marginal revenue, whether considered as of the short period or as of the long period, can be applied to the real world. Out of this have further developed more detailed studies of the processes by which firms actually make their decisions. Intertwined with this has been a consideration of the forces governing employment, growth and inflation.

Recently, both in the United States and here, there has been a combination of rising unemployment and low growth rates with supernormal inflation. The growth rates may be pronounced as low, both in relation to the previous performance of the countries in question and by international standards. This has been further complicated by a deficit in the external balance of payments in the United States, and also here until recently. This factor has had more influence on policy here than in the United States. It lies outside my present field of consideration.

The principles of policy that have prevailed for a number of years, which may perhaps be called "conventional wisdom," have laid down that the correct remedy for inflationary symptoms is to reduce aggregate demand by monetary and fiscal policies. Those who are fully convinced that inflation can be checked by these policies hope to explain the paradox of 1969/70 by time-lags. We could have confidence in this only if it were certain that the doctrines of the conventional wisdom referred to were based on firm foundations; but it is not certain. The doctrines in question have not only been prevalent among the most influential circles in the United States and here, but have recently (December 1970) been endorsed by the annual report of the O.E.C.D. on the United Kingdom.

Does this view now need to be modified? Would an expansionist policy intensify inflation in either country? The authorities suggest that the experiment of a more expansionist policy would be dangerous. But, of course, if the doctrine is wrong, it may be dangerous not so to experiment. When the underlying doctrines are uncertain, we are fraught with "danger" in all directions; it may be that the only way to avoid danger in this case

This content downloaded from
149.10.125.20 on Tue, 18 Jan 2022 13:55:01 UTC
All use subject to https://about.jstor.org/terms

is to establish and, if need be, enforce a thorough-going prices and incomes policy right away.

This question of whether a more expansionist policy in present conditions would have an inflationary trend takes us back to the United Kingdom position in the 'twenties. The United States did have more expansion than we did in that period, but did not suffer from price inflation, apart from prices on the Stock Exchange, which is a somewhat different matter. In a much more recent period the pace of inflation in the United Kingdom fell to a very low level in 1959 and early 1960, when a strong expansionist policy was in force. In 1963/64, the other period in the last fifteen years, when we had a fairly strong expansionist policy, the rate of inflation did not fall, but it was below that of the following three years when the economy was nearly stagnant. A distinction must be drawn between such a period as that of the early 'thirties, when the price-level had recently been strongly depressed and was clearly subnormal, and a case like the present, where it is not so.

It is even arguable that raising aggregate demand and production when aggregate demand is running below the supply potential of the economy would, by lowering real costs, have a damping effect on the inflation proceeding. These are matters urgently requiring study.

Expansion of aggregate demand might mitigate inflation not only in the short term, but also, more importantly, in the long run. After all, long-run developments are the sum of the consequences of decisions at each point of time. If for more of the time these are based on the requirements of rising demand, there will be more uplift on average over the longer period.

Furthermore current decisions are based on expectations. These will always be fraught with great uncertainty. One influence affecting them will be the vague climate of opinion about official policy within the relevant time horizon. The representative producer may fear that, although things look good at a given point of time, conventional wisdom will shortly induce the authorities to damp down demand, whether for balance of payment reasons or to check wage–price spiralling. Not only will this be inimical to producers ordering larger plant and thereby getting the benefit of long-run increasing returns to scale, but it will also discourage them from spending large sums on research and development. This is an important point.

Long run increasing returns to scale is essentially a static concept, as illustrated by the envelope curve. But in dynamics there is the possibility of a virtuous circle. If the prospect of the authorities firmly maintaining an increase of aggregate demand encourages producers to spend more money on research and development, this will enlarge that element in the potential overall increase of G.N.P. that is due to technological progress.

Conventional wisdom seems reluctant to acknowledge a sharp distinction between cost-push and demand-pull inflation. It may be that in this regard Keynes has inadvertently had an unfortunate influence. In his

This content downloaded from
149.10.125.20 on Tue, 18 Jan 2022 13:55:01 UTC
All use subject to https://about.jstor.org/terms

Treatise on Money these two separate determinants of the price level are clearly distinguished in his fundamental equations; but in the text he appears to assume that cost-push is mainly governed by demand-pull. In the *General Theory*, where his whole attention is concentrated on the determinants of aggregate demand, the question of cost-push fades further out of the picture. The consequence has been that some so-called Keynesians have tended to the view that price inflation can always be kept under control by having aggregate demand in his sense—this is of course only remotely connected with the size of the money supply—at the right level. I am convinced that Keynes, who was continually adjusting his views in the light of current experience, would, were he alive, firmly repudiate the doctrine that cost-push inflation can be terminated by reducing aggregate demand.

The whole question of wage-price spiralling needs special investigation. It is possible that what is normally regarded as " economics " would be unable unaided to elucidate this matter and would need to be supplemented by some kind of sociological study. An outbreak of wage-price spiralling may have a connection with the " social " attitudes of employers and employees. Be that as it may, a wage–price spiralling, once it has set in, seems to gather a momentum of its own, and to be independent of continuing external economic causes. It may be argued that our present wage–price spiralling (January 1971) was set going by the devaluation of sterling in November 1967, which inevitably raised the cost of living for wage-earners. But if, when once set going, the spiralling gathers its own momentum without any further stimulus, what is the correct economic remedy? Conventional wisdom does not appear to have an answer to this question.

And so the present situation presents a great challenge to the further study of certain underlying relations. Such study should not be exclusively empirical, but ought, if it is to be effective, to be related to economic theory. But it must be correct theory. The historical retrospect of this paper has endeavoured to illustrate the blending of empirical study and theoretical considerations. The result was the discarding of certain pseudo-theories that were not well founded. The problems give great scope both for pure economic thinking and empirical work.

Roy Harrod

Holt.

This content downloaded from
149.10.125.20 on Tue, 18 Jan 2022 13:55:01 UTC
All use subject to https://about.jstor.org/terms