SEVENTH REGIONAL MONETARY STUDIES CONFERENCE

13TH TO 15TH OCTOBER, 1975

****

SESSION I: THE PRICE DETERMINATION PROCESS
IN AN OPEN ECONOMY

Huntley G. Manhertz.

SEVENTH REGIONAL MONETARY STUDIES CONFERENCE

13TH TO 15TH OCTOBER, 1975

SESSION I: THE PRICE DETERMINATION PROCESS IN AN OPEN ECONOMY

SUMMARY OF THE DISCUSSION

Mr. Jones-Hendrickson opened the discussion. He identified the objective or purpose of the paper as the examination of price movements and the influence of successive dis-equilibria between levels of capacity and aggregate demand over time. He stated that essentially one wishes to focus on the importance, and to understand the underlying mechanics of price determination. The paper correctly downplays the classical approach to price determination. However, in testing the data, it reverts to the same classical approach and does not attempt to incorporate a vital element in so called mark-up pricing or target pricing. The paper could have considered showing, in terms of perhaps phase diagrams, what problems there are in the system; this could have been done equally well in terms of difference equation, because the author was looking at a general equilibrium system. What happens to price in the overall macro-economic system? Because mark-up pricing is simply a special form of target return pricing and since this is in a sense an expectations concept, the author could have better demonstrated his arguments if he had attempted to use difference equations showing the movement of prices over time.

A problem with the paper is that in the theoretical section, it builds up from the micro level to a macro level or the aggregative level, but then, it mentions and even stresses the fact that one needs to de-emphasise simultaneity. This is wholly unacceptable. If the system is a macro-economic system which contains several interacting variables, then clearly the paper should have used a simultaneous system of analysis rather than rely on a single equation system. Some more will be said about this later.

In terms of some other problems, the paper was really looking and trying to find which variables have impact in the system. What were the causative factors, what were the mechanisms which caused price increases or caused a sustained price increase. The notion of the ratchet effect as hinted by the author, is something that could have been explored further. This is an outgrowth of the consumption literature and since it seems to be very, very, important in open dependent economies; rather than getting the casual mention in the paper, it could have been explored, at least, one could have come up with something more feasible than we were treated to in the paper.

The problem of poor data was alluded to. In the empirical analysis of Caribbean economies, one is forced to work with whatever data is available, though one should subject them to as much rigorous analysis as the techniques would permit. The tractability of the particular study would have been enhanced if this approach was adopted.

In addition, since the paper is concerned at the first stage with the micro level, there is need somewhere in this particular paper for some survey techniques of the firms which are engaged in price formation, before one tries to use macro aggregative data to determine price formation at the micro level. What is being suggested is that there was need to have movement of the firms up and down rather than using macro aggregative data.

A problem was mentioned that firms seem to have set or seem to set lower bounds in terms of profitabilities. This is an interesting notion. Baumol mentions the fact that firms attempt to maximise sales and not profits. Many firms in the Caribbean do just that, because firms are taxed on their profits. Taxation is not treated in the paper at all. Taxation and the tax-rate setting must have some effects on price expectation especially so, in our kinds of economies. This would seem to be an integral part of the whole notion of mark-up pricing. The treatment of tax incidence, indeed the whole notion of public finance is a very weak one, and perhaps the author could not have drawn on readily available material to substantiate this point or to explore this point further. Nonetheless one must in looking at price formation, take into consideration the influence of taxation - what it does to firms, how do firms respond in terms of price setting, how do they incorporate changes in taxation, how do they view the variations in tax on profits, and what effects these taxes have on price movements. It is certain that a consideration of these factors would have given some insights into the upward movement of price.

One of the interesting things about this particular paper is the fact that it alludes to the classical market theory in relating the wage bill to gross output by industry, which is assumed to approximate the long run average market labour cost. Of course, this would influence the price of the commodity group over time. Professor A.G. Hines, among others, has been looking at this particular problem. We recall that the notion here is that the marginal productivity of labour is equal to the wage rate. In the Caribbean, somehow or other, trade unions have made it possible for the workers not to suffer from price illusion any longer and consequently the unions play an important part in causing or at least making it possible for prices to move up. The problem is that one cannot pinpoint specifically whether they are the catalysts of the price movement or whether they exacerbate the problem. The literature of this issue is very inconclusive. It would seem, that if we accept the notion of the classical labour market theory, then we're really defeating our purpose in the Caribbean.

Mr. Jones-Hendrickson said that he himself is unclear as to what particular formulation one needs to use at this particular point in time. However, it seems that one needs to make some allowances for the role of labour. He elaborated his argument by reference to the influence of external factors on labour productivity in the Caribbean. Clearly one cannot circumscribe the labour market of professionals, for example, to the Caribbean. When professionals' salaries change in certain places within the United States, for example, they have some resultant impact on the remuneration of corresponding groups in the Caribbean. To the extent that the Caribbean economies want to minimise salary differentials in order to retain labour in the Caribbean, movements in salaries overseas must of necessity have some impact on prices, either in the enclave sectors, or in the so called modern sector.

So we are saying here that external movements in wage rates, in payment for an external labour productivity, have some percolating effect on the labour in the Caribbean, and these have some resultant impact on price movement. The problem then would seem that we need to re-define our market in the Caribbean when we attempt to use the classical market theory. Perhaps it is not really an appropriate body of theory.

In terms of some methodological problems and the question of the empirical section, first of all, the paper could have employed the first differences in the data, in order to purge equations of serial correlation.

Secondly, there is distinct possibility that in this particular single equation, which includes lagged endogenous variables, the use of Durbin Watson statistic is rather meaningless. The lagged dependent variables results in biased estimates of the coefficients, and therefore cannot be really reflective of the impact that one is trying to measure.

With respect to simultaneity, the author should have attempted to use "Two Stage Least Squares" analysis and especially its variant, instrumental variables. Single equation estimates would not capture fully the effects of critical variables. Instrumental variables in a sense is looking at those crucial variables, which would serve to give us the impact.

Perhaps the author also could have used impact multipliers because, this is what we want to know - what factors cause the inflation? Was it an external factor or local factor? What is the component of the price increase? Is it from the external factor or the local factor?

The influence of non-quantifiable factors could have been incorporated. Stating that he does not like to use dummy variables, Mr. Jones-Hendrickson argued nonetheless that their use in this context at least, could have provided an elementary explanation until one comes up with tangible data.

In conclusion, the paper provides a good attempt at coming to grips with the problem of inflation in the Caribbean. However, one needs, within the framework of these kinds of economies - the open dependent economies - to start looking at specified types of markets; start looking at specific types of price setting. In addition, one needs to be very careful about the particular methodological techniques employed. Perhaps it is necessary to reformulate the structures as conceptualised in the classical economic system, so that they would fit our system more appropriately. This is not to say that one should discard the classical system. But at least it would give us a better basis from which to operate. Overall then the pluses of this particular paper are that it attempts really to open our eyes to some crucial factors. However, in terms of the actual presentation in this particular paper, there are some serious limitations which the author could take care of and certainly in due course would be taking care of.

Miss Howard raised a point which according to her many economists seem to gloss over and to a certain extent probably discard, and consider probably illegitimate. That was the point of income adjustment by self-employed persons, particularly the very low income group. The argument can be made by reference to an example. Suppose, for example, a coconut vendor increases his price because the prices of some imports have increased. All of us, or at least many of us consider such a price increase as an illegitimate adjustment. However, it is quite a legitimate adjustment. The coconut vendor has to consider the maintenance of his income, because he has to face the increased prices which will ramify throughout the whole economy with the increased cost brought on by any devaluation. Miss Howard stressed that this kind of economic response should be treated as a legitimate factor in any econometric model. This would assist decision takers to be aware of the full impact of their decisions, especially since they constantly claim that it is only in certain sectors that we will be having increases brought on by devaluation.

At the same time, they may then be made aware of what types of steps might be taken to counteract the grave disadvantages that will ensue particularly to the low-incomed, and self-employed, because these persons do not have employers from whom they may request increased wages and press their claims through strong unions. Furthermore, one has to recognise that a uniform absolute increase in total expenditure has a greater proportionate effect on lower incomes than on higher incomes. So that, this question of income adjustment is something that must be taken into consideration in all analyses made by economists. This has been the grave short-coming in our general approach to price determination and our general approach to the decisions taken for adjustment of exchange rates. Taking this factor into account will assist us in taking better decisions or at least in recognising what are the total effects of any exchange adjustments.

Dr. Worrell directed attention to Dr. Manhertz's treatment of wages. It is interesting, he thought, that Dr. Manhertz, having discovered that wages are not significant found it necessary to emphasise that we ought still to do something about them. It was Dr. Worrell's view that economists who have to take decisions or who act in a sort of decision-making or decision-advisory role, have to be conscious of the fact that they do not have a complete explanation or complete control - even if we had a complete explanation - of the inter-relationships within the economy, in a way which will allow them to operate in a very strictly deterministic way. It is always the case that one has to identify the variables which are likely to have the most significant effect and take policy measure based on this decision.

Therefore it seems very dangerous when Dr. Manhertz discovers that (with whatever qualifications he wishes to make about the data and so on) a particular variable, namely wages, is to the best of his knowledge, not significant, and, what is more, this discovery does not contradict common sense, (because he starts off by assuming that the economy is very small, and very highly open so that the most significant feature or factor in domestic price determination has to be import price movements), that Manhertz wishes to make wages-policy one of the basic planks of a policy of price control. There seems to be a basic contradiction between this policy recommendation and the statistical result.

Policy makers ought to have some general idea of what level of wage increases the economy might stand in various sectors and so on. Moreover, the situation arose where there was wholesale industrial dislocation and where the general level of wage increases was, say twice what could be considered reasonable - in the extreme cases, in other words - one might have to step in and do something about this. However, wage restraints should not be one of the basic planks of a policy of price control in a situation where wages are demonstrably, or where to the best of one's empirical evidence, wages do not appear to be significant.

Mr. Augustin stated that as political economists, we should examine all the theoretical concepts available and then see to what extent we can draw the line in applying these concepts to our own situations. He thought that the paper uses as a basis of analysis, the classical and neo-classical theories, and in no way attempted to look at some of the socialist theories as far as price determination is concerned. Perhaps it would have been useful if the author had examined the whole concept of the labour theory of value, the questions of prices and the satisfaction of demand, the inter-industry relationships - particularly, in terms of input-output analysis -

and the whole concept of alienation of the workers.

Particularly as far as his analysis with respect to wages is concerned, perhaps if he had looked at the concept of alienation, he might have been able to draw some conclusions with respect to wages and the activities of Trade Unions. Perhaps, when we look at page 51 and we see the differences of that dotted line, it will explain the importance of considering other variables - the whole question of profit mark-ups. Mr. Augustin observed that the author avoided the latter issue as well as the effect of taxation on prices which was mentioned by Mr. Jones-Hendrickson. His neglect of those factors shows the importance of a simultaneous model in which those variables must be taken into account in looking at price determination.

Finally, Mr. Augustin said that as political economists, it is necessary for us to come out with certain recommendations with respect to policies. He found the paper deficient in this respect.

Mr. Barton congratulated Dr. Manhertz for a very perceptive and informative paper. Referring to the example of the coconut vendor cited by the Central Bank of Trinidad and Tobago, he argued that what really permits the coconut vendor to increase his price, is not so much that his cost has gone up. I thought that might be his motivating factor. The basic reason is when prices all around him rise, there is a greater effective demand merely because prices have gone up, and therefore elasticity of demand for his coconut changes. So that when the vendor increases his price, he is in effect reacting to those changes in demand conditions.

Mr. Boissiere also shared the concerns which Mr. Jones-Hendrickson expressed with respect to the methodological shortcomings of the paper. By not using simultaneous equations estimation techniques as opposed to the single equations, the author arrived at some conclusions which are not supported by the actual data in the tables presented. For instance, Table 1 shows that the rate of inflation was highest between the period 1972-1974. Table 2 also suggests that Jamaica (which has shifted its imports from the United Kingdom to the United States during that period) had a very high rate of inflation, so that some of the price increases in Jamaica may have resulted from the prices imports, the levels of imports, and the shifts to the United States.

Again Table 5 shows that while wages maintained its share in G.D.P., corporate profits increased its share during that period considerably from 9% to 21%. Superficially at least, the data suggests that the corporate profits and the desire to maintain and increase the rate of increase profits during the inflationary period is the major contributing factor. Finally, Mr. Boissiere asked Dr. Manhertz what are the implications of his paper for policy purposes, in view of many Caribbean Governments' expressed desires, at this period in time, of an incomes policy.

Dr. Manhertz in reply expressed his gratitude for the several comments made. He dealt with a few points. First, the question of methodology and the analytical approach involved.

The primary discussant had observed that the paper downplays the classical approach to price formation, but reverts to it in the analysis and did not fully analyse the market principle. Dr. Manhertz reminded the participants that in his concluding statements, he made the point that if one wants to come up with meaningful set of policy parameters, it is useful to look at the price formation process at the level of the firm which can only be done by actually assembling data, examining what are the prime forces behind decision making at the level of the firm and why prices move? He would agree that it is important that one examines the information at that level.

Several commentators had made reference to the question of completeness of the exercise as regards the simultaneous equation system, and further, the primary discussant made reference to the use of a system of difference equations in order to capture lags and leads effects or lags and leads conditions. Dr. Manhertz stated that, though it is good and it is very elegant to undertake these exercises, there are certain problems - problems relating to the quality of the data, and a number of other statistical problems - with which one would have to deal, in order to make these rather elegant exercises meaningful and practicable. In terms of getting an operational exercise at this point, the poor quality of the data which we have available to us prohibits that degree of rigour and elegance. Yet, the poor quality of data should not prevent one from taking some first step in this regard. Secondly, the primary discussant suggested that one problem in the Caribbean is that the wage-rate might be greater than the marginal product of labour because wage-rates are bid up by what happens outside of Caribbean economies. The question is, what ought to be done to ensure that this is not the case.

Thirdly, Dr. Odle questioned the use of marginal analysis. Dr. Manhertz said that he did not believe the concept of having your wage rate being at least equal to your marginal product of labour is inconsistent with any kind of socialist philosophy. The problem, he suspected, is how does one really measure the productivity of a worker in the system, who happens to be receiving less than the average wage. It might be that he is discriminated against. If a worker enjoys a very low wage rate, or if an industry enjoys a very low wage rate, it could be the reflection of two things:

(a) that the worker's marginal product is very low - and that would be consistent irrespective of whatever system;

(b) his marginal output is larger than what it is assessed to be, and he is therefore being underpaid.

It is as simple as that. But it is certainly not right to suggest that one should not use the concept of marginality in assessing what wage rates are supposed to be in any system. Fourthly, Dr. Manhertz stated his example of the cononut vendor was intended to make the argument that in many cases profit-takers attribute or try to use changes in price levels - though irrelevant to their situation - directly to increase price levels, and therefore use that route to increase the levels of profits.

Finally, on the question of the policy conclusions of his study, Dr. Manhertz said that though empirically a very clear relationship might not be observed because of historical factors, it would be irresponsible to disregard that particular variable which is statistically significant but which might not show up as a main contributor historically. In the context of an incomes policies, one has to examine the movements or the effects of all inputs (profits, wages, dividends, etc.) and to set guidelines on these. The guidelines which are set might be of a long term nature or a short term nature. But, it is important that all of these variables must be examined in detail. Finally, Dr. Manhertz asked Mr. Jones-Hendrickson to clarify his point about the effects of profits taxation on prices.

Mr. Jones-Hendrickson stated that he was suggesting that a firm can pass on an anticipated or an actual increase in taxes on profits on to consumers by charging higher prices. One should therefore examine the behaviour of taxes over time to see whether they have had an inflationary effect.

Dr. Manhertz in response said that a system that encourages the passing on of increased taxes through prices to the consumers, is in effect a very inefficient system. If profits are stated at a certain level, and cannot be increased, i.e. the firm cannot become more efficient, the tax will in effect reduce post-tax profits. Since the firm wants to maintain that level of post profits, which is either distributed or ploughed back, it simply marks up the price. In his view, this is not the kind of adjustment any responsible tax authority should encourage. It should either reduce the level of post tax profits, and set price guidelines so that tax increases are not passed on to the consumer, or, it should proceed directly to tax the consumer, rather than having the firm pass it on. In fact, what might very well happen is that the amount which is passed on in terms of prices might be far in excess of the amount which is paid in taxes. So that the firm ends up with a higher profit after all is said and done.

The Chairman then thanked the discussants and concluded the session.