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Special Forum on »Macroeconomic Theory and Macroeconomic Pedagogy«

The New Consensus in macroeconomics and non-mainstream approaches

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Introduction

Giuseppe Fontana and Mark Setterfield have edited an interesting book on the relationship between recent developments in macroeconomics and the teaching of the discipline at the undergraduate and intermediate levels (Fontana/Setterfield 2009).¹ The editors have chosen to focus the book on the »New Consensus« in macroeconomics, on criticisms of such an approach and alternatives to it. The »New Consensus« is presented in its simplest version as it is presented when teaching macroeconomics at the introductory and intermediate level. The »New Consensus« is characterized by a three-equation model. In this model, the quantity of money is endogenously determined and the »old Keynesian« LM curve is

1 In their words, the primary concern of the book is »with the development of simple macroeconomic teaching models in light of recent developments in macroeconomic theory« (Fontana/Setterfield 2009: 1).

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abandoned. The collection of essays presented by Fontana and Setterfield offers a presentation of the »New Consensus« model and critical alternatives to it by scholars engaged both in the mainstream and in the heterodox (mainly post-Keynesian) camps.

The book, with a foreword by C. E. Walsh, is structured in four parts. Part I, devoted to presentations and critical appraisals of the »three-equation new consensus macroeconomic model« (NCMM from now on), contains 6 chapters by Carlin and Soskice, Wren-Lewis, Chadha, Tamborini, Arestis, Colander and Rothschild. Part II is concerned with the theory of endogenous money and it has three chapters by Sawyer, Fontana and Setterfield, Howells. Part III is about some amendments to the NCMM, in particular the problems of financial fragility and hysteresis, with three chapters by Lavoie, Weise and Barbera, Wray and Tymoigne. Finally, Part IV deals with the interest rate, income distribution and stabilization policies in four chapters by Smithin, Hein and Stockhammer, Brancaccio, Ferreiro and Serrano.

The editors distinguish the 16 chapters of the book between those intended for the students' direct consumption and those aimed at instructors. The chapters, however, could also be divided along another line: those that focus on the presentation, discussion and critical appraisal of the current mainstream macroeconomic model; those that mainly concentrate on the presentation of altogether alternative models, generally inspired by the post- Keynesian tradition.

All the chapters are of great interest to everybody concerned with macroeconomics but, obviously, it is not possible to enter into a thorough discussion of all topics and contributions in a single short paper. This paper, therefore, concentrates on some issues raised by the chapters more directly concerned with the NCMM. More in particular, the paper looks at some of the problems related to the choice to focus on the basic version of the NCMM.

In so far as the editors' choice is to concentrate on introductory and intermediate macroeconomics, the choice to focus on the three-equation model is valid but, at the same time, this choice raises some problems. The choice to focus on the simplest version of the »New Consensus« could make some criticisms of it appear somewhat ungenerous. On the other hand, concentrating on the simple version of the three-equation model offers the opportunity to point to a significant weakness of the current dominant paradigm in macroeconomics. But this opportunity, unfortunately, is largely missed by the contributors to the book.

This contribution is organized as follows. The next section presents the three-equation model. Afterwards, it looks at some of the criticisms of the NCMM for being too simplistic. The following section is devoted to the interpretation of the NCMM (in particular, its notion of equilibrium) and the possibility to use it in order to emphasize some difficulties that mainstream macroeconomics encounters. The last section concludes.

The three-equation model

The macroeconomic model that most mainstream economists use today to introduce students to the study of macroeconomics is a short-medium period model based on the assumption that the prevailing market form in the economy is some kind of imperfect, or monopolistic, competition. The model, in its simplest version, is made of three equations, which do not include the LM function of the traditional Keynesian models.

The three equations of the NCMM are: an IS equation, an expectation-augmented Phillips curve and a monetary rule. The IS function can be formulated as follows:

$$y - y_e = -a(r - r_e) \quad (1)$$

where y_e denotes the equilibrium level of output and r_e is the real interest rate associated to it. The deviations of the actual output y from y_e are associated to the deviations of the actual interest rate r from its equilibrium level r_e .

The second equation is an expectation-augmented Phillips curve:

$$\pi = \pi_{-1} + \alpha(y - y_e) \quad (2)$$

Expected inflation is set equal to inflation in the previous period, π_{-1} . The third equation, the monetary rule, is:

$$y - y_e = -b(\pi - \pi^T) \quad (3)$$

where π^T is the central bank's inflation target. In the model, monetary policies are implemented by central banks by setting the short-term interest rate. Central banks do not control the quantity of money, which instead is endogenously determined.

Both workers and firms are price-makers with a certain degree of market power, so that both wages and prices are set at values above those which would prevail in perfect competition. The money wage rate is set, through bargaining, at a level W that depends on the price level, P , and the level of employment, E :

$$W = Pl(E) \quad (4)$$

with both $\frac{dW}{dP} > 0$ and $\frac{dW}{dE} > 0$. From (4) we obtain

$$w^B = \frac{W}{P} = l(E) \quad (5)$$

which is the real wage rate that workers aim to, when they bargain at the level of employment E .

Prices are set by firms by applying a mark up μ to their unit prime cost, v :

$$P = (1 + \mu)v$$

The unit prime cost is given by the unit labor cost $\frac{W}{\lambda}$ (with λ denoting the productivity of labor) plus the unit cost of raw materials m . If we do not take raw materials into consideration, we have

$$P = (1 + \mu)\frac{W}{\lambda} \quad (6)$$

From (6) we obtain²

$$w^F = \frac{W}{P} = \frac{\lambda}{(1 + \mu)} \quad (7)$$

which is the real wage rate determined by the firms' price setting.

Usually, in the model it is assumed that firms set the price P *after* that money wages have been set through bargaining. This implies that the *actual* real wage rate earned by workers is always w^F . Therefore, only firms can determine the actual real wage rate.

The w^B function is certainly increasing in E and, hence, in the output. As to the w^F function, its behavior with respect to changes in E is less straightforward. The function can be either flat or decreasing in E . Its shape depends on the hypotheses made on the behavior of λ and μ with respect to changes in E . If it is traditionally assumed that the labor productivity is decreasing in E , also the w^F function is obviously decreasing in E if μ is kept constant.³ If, while λ decreases, the mark up behaves in such a way to compensate for the effect of a lower λ , the w^F function can be flat (Carlin/Soskice 2006: 49). Finally, if the average prime cost is assumed to be constant over the business cycle and firms are assumed to apply a constant mark up to such average prime cost, the w^F function is flat as well.

Often, at least for the sake of simplicity, the hypothesis of a flat w^F is made. The main implication of a perfectly elastic w^F is that the *actual* real wage rate earned by workers is constant at whatever level of employment.

The labor market is in equilibrium when w^B and w^F intersect, that is to say when the workers' and employers' claims on the real output per head are compatible with one another. It has to be $w^B = w^F$, i.e.

$$l(E) = \frac{\lambda}{(1 + \mu)} \quad (8)$$

By solving (8) in E , we obtain the equilibrium level of employment E_e and, given a certain production function, the equilibrium level of output y_e . If N is the total labor force, the equilibrium rate of unemployment, or natural rate of unemployment, or NAIRU, is:

$$u_e = \frac{(N - E_e)}{N} \quad (9)$$

If the economy deviates from its natural level of unemployment and, in particular, if the actual rate of unemployment is smaller than u_e , an inflationary process starts. Equation (2), the Phillips curve, describes the dynamics of this inflationary process.

The »equilibrium« inflation rate, π_e , is that associated with u_e . If this inflation rate coincides with the central bank's inflation target π^T , the central bank does not intervene with

2 (6) tells us that the real wage rate is a certain fraction of the labor's unit production (labor productivity), which is decreasing in the mark up μ .

3 In other words, the real wage rate set by firms decreases as the level of employment rises.

variations of the interest rate. If the actual inflation rate is $\pi \neq \pi^T$, the central bank intervenes by implementing a restrictive or expansionary monetary policy.

The model above represents by now the standard exposition of the mainstream approach to macroeconomic analysis. This same model, or its implications and results, is very often used also for policy discussions. In particular, the model and its results are used to argue that monetary policy is effective, i.e. capable to affect output and employment, only in the short period. In the medium to long period, the real variables depend on the supply side of the economy. Attempt at employing monetary policies (or fiscal policies, for that matter) to increase y_e permanently produce only inflationary effects. This, of course, means that the actual interest rate cannot deviate permanently from its equilibrium level r_e .

The 'simplistic' nature of the NCMM

Several chapters in the book criticize the NCMM for being too simplistic, i.e. for overlooking a considerable number of issues that need to be considered to understand real economies. For example, the NCMM is blamed for its excessive concentration on closed economies; for not considering asset prices inflation; for not considering more sophisticated versions of the Phillips curve; for not dealing with the relationship between the overnight interest rate, controlled by the central bank, and the whole constellation of interest rates relevant for the economy, etc.

These sorts of criticisms are obviously correct if directed to the simplest version of the NCMM. But the model presented in the previous section, as well as in the first three chapters of the book by Carlin and Soskice, Wren-Lewis and Chada, can be extended to consider all the elements mentioned above. The model can be applied to an open economy, with all the required changes in the IS equation. The analysis can also be extended to consider at least a short-term and a long-term interest rate, instead of considering only the short-term interest rate directly controlled by the central bank. Finally, the model can embody a more sophisticated Phillips curve, which for example takes account of hysteresis.

The book would have greatly benefited from the inclusion of some more chapters dealing with extensions and generalizations of the NCMM. Such chapters could have been written by economists who essentially believe in its merits and in the underlying general economic principles on which it is based. Had the editors chosen to give space to more sophisticated versions of the NCMM, some of the criticisms asking for more topics to be covered by the mainstream model would have found an immediate response. Such a choice, moreover, would not imply a shift from the focus on the teaching of intermediate macroeconomics. In fact, Carlin and Soskice, in their intermediate textbook (2006), extend and elaborate on the three-equation model.⁴

4 In particular, they give considerable attention to open economies. They also examine the problem of the micro-foundations of the NCMM, an aspect that, instead, is largely ignored by both the mainstream and heterodox contributors to the book.

But the simplicity of the NCMM raises another more interesting problem, which should receive more attention. Once the model is developed to take into account important elements of the real world, also its policy implications become more complex than those derived from its simplest version. An example will suffice: if the labor market is characterized by significant phenomena of hysteresis, it is certainly not enough, or it is plainly wrong, to invoke restrictive monetary policies as the only recipe to fight inflation. Restrictive policies adopted by the central bank can easily produce adverse effects on the rate of inflation rather than produce the outcomes predicted by the simple three-equation model.

However, in the debate on economic policy, the implications that derive from using more complex models tend to be overlooked and the simple policy indications of the basic model are regarded as valid also when dealing with the problems of the world in which we live. Such an attitude may be stronger among policy makers rather than academic economists, but the latter do not engage themselves seriously to contrast these illicit policy inferences.

The criticisms of the simple NCMM, then, could be more fruitfully developed along such lines rather than by concentrating on the mere analytical simplicity of its basic version. To start from the model and its policy implications and then show how they must necessarily be changed when approaching the real economy can be a very useful pedagogical instrument. In particular, it gives the opportunity to underline the complex nature of the real world and the inadequacy of any simplistic policy recipe like, for example, the NCMM version of inflation targeting.

Wicksellian and non-Wicksellian equilibria

Many mainstream as well as post-Keynesian macroeconomists tend to identify the interest rate associated to the equilibrium level of output and unemployment (NAIRU) with the Wicksellian natural interest rate, so that the output level associated to it is the »natural« equilibrium output.⁵ Also in the book edited by Fontana and Setterfield, several contributors refer to the NCMM equilibrium as a Wicksellian equilibrium.

I believe that this sort of interpretation is basically flawed. Mainstream macroeconomists mistakenly interpret the three-equation model equilibrium (y_e) as a Wicksellian equilibrium. Non-mainstream economists should not follow the mainstream by accepting this interpretation; they should stress other important characteristics of the equilibrium obtained by the NCMM.

To better understand this point, it may be useful to recall briefly the analytical methodology underlying the current macroeconomic paradigm. The basic methodology of the current dominant macroeconomic paradigm can be summarized as follows.

1. Build a neoclassical model of an economy in perfect competition, with (representative) rational agents that maximize utility and profits over an inter-temporal range.

5 Woodford (2003) is the economist who most emphasizes the Wicksellian characteristics of the current dominant paradigm in macroeconomics. See also, for example, Weber (2006), who concentrates on monetary policy.

2. Find the equilibrium solutions, and their welfare properties, of this model. Such solutions have the traditional neoclassical properties (no involuntary unemployment, factors remunerated according to their marginal productivity, etc.).
3. Introduce a number of ›imperfections‹ into the model; essentially some forms of wage and price rigidity.
4. Find the new equilibrium and study the way in which the ›imperfect‹ model deviates from the ›perfect‹ model, which is given the role of a *benchmark*.
5. Study the policy implications deriving from the introduction of imperfections (non-neutrality of money and monetary policy in the short to medium run; output and employment depending on aggregate demand; involuntary unemployment; etc.) and the way in which policy can be used to bring the ›imperfect‹ economy to its own equilibrium.⁶

The criticisms that can be addressed to this sort of approach are serious and many. More in particular, two stand out: the rationale and the need for constructing and using the perfectly-competitive benchmark to which contrasts the alleged real world of the imperfectly-competitive model; the sort of imperfections that are introduced into the neoclassical model in order to obtain ›Keynesian‹ results.⁷ Here, however, it is more interesting to look at another aspect, that is to say the Wicksellian interpretation of the equilibrium determined through the three-equation model, which is a simplified version of the imperfectly-competitive model.

The equilibrium solutions of the three-equation model are often called Wicksellian but, as it can be easily seen in the second section of this contribution, the determination of the non-inflationary equilibrium does not require any recourse to the Wicksellian natural interest rate, associated to an economy working in conditions of perfect competition in which the factors are remunerated at their marginal productivity.⁸

The equilibrium interest rate, r_e of the NCMM is, like the Wicksellian natural rate, non-inflationary but there is no necessary link between this rate and the marginal productivity of capital.⁹ In fact, the three-equation equilibrium (r_e, y_e) deviates from the benchmark equilibrium (r^*, y^*), which could be properly defined as Wicksellian.

The analysis can be developed by studying the factors that make the two equilibria differ, that is to say the way in which imperfections push the economy away from its ›natural‹ equilibrium. However, when macroeconomics is taught at the introductory and intermediate level, very little, if any, attention is paid to the underlying micro-foundations of the

6 The structure and organization of Blanchard and Fischer (1993) is perhaps the clearest exemplification of this type of approach.

7 Even Blanchard (2000) has some doubts about the current practice of using the perfectly competitive benchmark, which he justifies on the grounds of easiness of communication in the profession. As to the crucial imperfections required to have Keynesian results, the new-consensus macroeconomists do not seem to go far beyond the old Keynesians: wage rigidity is the ultimate cause of involuntary unemployment.

8 See, for example, Wicksell (1936: 102 – 21).

9 In other words, there is no need for having a (long-period) equilibrium in the capital market.

model and the comparisons between the three-equation model and the neoclassical benchmark are scant. Attention is instead concentrated on the equilibrium produced by the three-equation model and the policies that must be implemented to keep, or bring back, the economy in such equilibrium. More importantly, the policy debate is also based on the three-equation model rather than on the perfectly competitive benchmark. Monetary policy is seen as the fundamental device through which the authorities bring the economy to y_e , not to the equilibrium output of the perfectly competitive model, y^* .

In the non-perfectly competitive economy of the NCMM, given the market power of workers and firms, given the economic and social context,¹⁰ there exists a unique level of output and employment (unemployment) at which inflation is constant, i.e. at which the workers' and firms' claims on the output are compatible.¹¹ This equilibrium level of output is, in turn, associated to that interest rate r_e that ensures that aggregate demand equals aggregate supply, given the IS function (1).

In other words, the equilibrium of the three-equation NCMM cannot be defined as a state of the economy determined exclusively by the fundamental factors that determine the neoclassical equilibrium under the hypothesis of perfect competition. Since the market power of the agents is affected also by social, political and historical factors, so is the resulting non-inflationary macroeconomic equilibrium.¹²

The nature of the imperfectly competitive equilibrium has another important implication. When the assumption of a given and constant equilibrium level of the output (y_e) is lifted and it is allowed to grow over time, the standard approach is to consider a growth rate that is determined by a neoclassical growth model. If the medium-run equilibrium of the three-equation model is interpreted in the alternative way suggested above, it is evident that the growth of y_e cannot be simply explained by any long-run growth model. Other factors of a different nature contribute to determine the possible movements of y_e from one period to the next. Consequently, also the dynamics of the neoclassical perfectly competitive economy can constantly diverge from the dynamics of the non-competitive economy of the NCMM.¹³

Why are these aspects important from a non-mainstream viewpoint? Their importance lies in the fact that they imply that the three-equation model can be interpreted and used, at least partially, in a different way from the mainstream. The model tells us that the

10 By economic and social context I mean the structural features of the economy (the level and composition of productive capacity as well as labor force, the level of productivity, etc.) and the socio-political institutions and arrangements (welfare system, unemployment benefits, unions' organization, etc.).

11 There can be multiple equilibria in an open economy with a floating exchange rate.

12 Moreover, even though such level of output is normally defined as an equilibrium, it should be pointed out that the model does not contain any endogenous factors ensuring that the economy tends to it when in disequilibrium. In fact, to ensure that the economy tends to its equilibrium, it is necessary to assume a non-inflationary stance of the central bank.

13 Further considerations along these lines would lead to rejecting the very notion of the neoclassical long period. In a Kaleckian sense, the long period is a sequence of short (medium?) periods.

levels of output and employment are demand-determined, but also that the growth of production and employment through the expansion of demand is constrained by inflationary processes that can be triggered by increases in wages and prices incompatible with one another. In other words, the economy is characterized by the existence of a *critical* level of output, and employment, beyond which it cannot go without giving rise to growing inflation. Such critical level of output is by no means ›natural‹, but affected by social, political and historical factors.

This line of interpretation is, in my view, compatible with a post-Keynesian view of the economy and, indeed, it has been followed and developed by many post-Keynesians. Given, the way in which markets work, a non-inflationary expansion of the aggregate demand to stimulate production and employment must be accompanied by *incomes policies*, which ensure that the dynamics of wages and profits is kept in line with the dynamics of productivity.¹⁴

Most contributors to the book underline that the NCMM rejects the use of the LM curve and takes money as endogenously determined, which are important aspects in common with the post-Keynesian tradition. Most contributors, however, do not take into consideration also the possibility to refer and use the NCMM both as a starting point to develop the analysis and policy indications along different lines as well as the possibility to use it as an instrument to point to some inherent weaknesses of the current paradigm. In my view, it is a pity that these aspects fail to receive due attention in the book.¹⁵

From a pedagogical viewpoint, to individuate and stress a ›non-Wicksellian‹ interpretation of the NCMM gives teachers the opportunity to show students a direct link between the mainstream and contributions from other schools of thought. The latter would not be seen simply as an alternative with little influence on the dominant paradigm but as an alternative interpretation of some aspects of the economy on which there is now a certain degree of consensus (the imperfect nature of markets, the endogeneity of money, the relevance of aggregate demand, etc.).

More in particular, what should be emphasized is the different policy implications of the ›non-Wicksellian‹ interpretation of the NCMM. Whereas the mainstream concentrates on monetary policy as the instrument to ensure a constant inflation rate, an alternative interpretation of the model would rather concentrate on the necessity to control the dynamics of wages and prices. The different social costs of these two policy approaches are evident: in the NCMM, the equilibrium level of output cannot be altered through variations of aggregate demand; in the post-Keynesian approach, increases in the level of aggregate demand can produce *stable* higher equilibrium levels of output, provided adequate incomes policies are implemented.

At a more general theoretical level, a ›non-Wicksellian‹ interpretation of the NCMM allows post-Keynesians to point out an inherent weakness of its mainstream interpretation.

14 See, for example, Weintraub (1978) and Harcourt (2001: 66 – 80).

15 The most noticeable exception is the chapter contributed by Hein and Stockhammer, which proposes a post-Keynesian policy-mix that includes incomes policies to check inflation.

In particular, it makes it easy to show that accepting the current model, despite its flaws, implies also accepting that the theoretical link with the neoclassical tradition is becoming weaker and weaker: the »equilibrium« of the economy has little to do with »natural« elements and much to do with social, political and historical forces that, in any given situation, crucially affect the extent to which the economy can produce welfare and employment.¹⁶ For these reasons, adequate macroeconomic policies can promote higher equilibria, associated to higher levels of employment and welfare. Both monetary and fiscal policies are not mere instruments to keep inflation under control through variations of aggregate demand.

Conclusion

When reviewing the work of people with whom one largely agrees on many issues, there is always the risk to concentrate on the points of disagreement. This is certainly true also for this short note, in which I refrained even from enumerating the many aspects on which I agree with both the editors and the individual contributors of the book. I would like to use this conclusive section to, at least partially, amend my »overcritical bias«.

The book has the merit to bring together economists and approaches from different camps that traditionally have an »asymmetric« attitude in their relationship with the other. While the mainstream is essentially self-referential, i.e. it pays little, if any, attention to criticisms and alternative approaches, the latter are often essentially focused on the critique of the mainstream and less attention is paid to the development of independent alternative analyses and explanations of the economy. This book is one of the few examples in which this tendency is broken and an effort to change is seriously made. What is particularly important, in my view, is that the editors have chosen to contrast the mainstream and heterodox approaches at the pedagogical level, that is to say what to teach and how to teach.

If the book will be successful, as I hope it will be, it could be a first step toward the solution of the schizophrenia by which many non-mainstream academics are affected. Those who do not believe in the theoretical superiority of the current paradigm face a dilemma. When teaching at the introductory and intermediate level, should one teach the current paradigm because this is what is done by the very large majority of the profession? Or should one teach what believes to be correct, i.e. an altogether alternative interpretation of economic theory? Choosing the first alternative has obvious huge costs as it contributes to the reproduction of ideas that are considered wrong. Following the second way is also very costly as it implies the risk to put one's students in an inferior position. Students trained by ignoring the mainstream can hardly confront and debate with the large majority of the profession.¹⁷ After all, effective criticisms require a good knowledge of the object that is criticized.

The best option would be to teach, compare and discuss all the different approaches and interpretations. But such a choice is not an easy one for many reasons. One of these rea-

16 Blanchard (1997: 310), again, underlines the non-natural character of the NCMM equilibrium, even though he keeps using the term »natural« for easiness of communication.

17 Not to mention their greater difficulty to find jobs within and outside the academia.

sons is that one does not easily find either textbooks or other works that offer a sufficiently exhaustive panorama of the different macroeconomic approaches that today are prevalent. The book edited by Fontana and Setterfield is a welcome help in this direction. It provides teachers and students with an accessible general overview of the state of the macroeconomic debate today, which can be fruitfully used to develop more informed and critical points of view among students.

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