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**The Absence of  
Environmental Issues in  
the New Consensus  
Macroeconomics is only  
one of Numerous Criticisms**

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# Presentation

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1. **Introduction**
2. **The Economics of the New Consensus  
Macroeconomics**
3. **Economic Policy of the New Consensus  
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# The Economics of the New Consensus Macroeconomics

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*Aggregate demand equation*

$$Y_t^g = \alpha_0 + \alpha_1 \cdot Y_{t-1}^g + \alpha_2 \cdot E_t [Y_{t+1}^g] + \alpha_3 \cdot (R_t - E_t [p_{t+1}]) + \alpha_4 \cdot (rer)_t + s_1;$$

*Phillips curve*

$$p_t = \beta_1 \cdot Y_t^g + \beta_2 \cdot p_{t-1} + \beta_3 \cdot E_t [p_{t+1}] + \beta_4 \cdot \{ E_t [p_{w,t+1}] - E_t [\Delta er_t] \} + s_2;$$

*Monetary policy rule*

$$R_t = (1 - \gamma_3) \cdot [RR^* + E_t [p_{t+1}]] + \gamma_1 \cdot Y_{t-1}^g + \gamma_2 (p_{t-1} - p^T) + \gamma_3 \cdot R_{t-1} + s_3;$$

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*Real Exchange rate equation*

$$rer_t = \delta_0 + \delta_1 \cdot \left\{ (R_t - E_t [p_{t+1}]) - (R_{W,t} - E_t [p_{W,t+1}]) \right\} + \delta_2 \cdot CA_t + \delta_3 \cdot E_t [rer_{t+1}] + s_4;$$

*Current account equation*

$$CA_t = \lambda_0 + \lambda_1 \cdot rer_t + \lambda_2 \cdot Y_t^g + \lambda_3 \cdot Y_{W,t}^g + s_5;$$

*Nominal Exchange rate equation*

$$er_t = rer_t + P_{W,t} - P_t ;$$

# The Economics of the New Consensus

## Macroeconomics

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- Six equations and six unknowns: output, inflation, interest rate, current account, nominal and real exchange rate;
- Basic assumption: intertemporal optimization throughout;
- In terms of the utility function intertemporal optimization, which reflects optimal consumption smoothing, rational expectations and the transversality condition are very important assumptions;

# The Economics of the New Consensus Macroeconomics

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- The transversality condition means that all debts are ultimately paid in full, thereby removing all credit risks and default;
- Economic agents with their rational expectations are fully credit worthy;
- All IOUs are perfectly acceptable in exchange;

# The Economics of the New Consensus Macroeconomics

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- All financial assets are identical so that there is a single interest rate in any period, which changes over time;
- Nobody is liquidity constrained;
- It is a non-monetary model: no banking or any other financial sector or monetary variables;
- Economic policy objective: price stability;



# The Economics of the New Consensus Macroeconomics

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- Inflation is a monetary phenomenon, controlled via changes in the nominal rate of interest;
- A change in the nominal rate of interest is followed by the real rate of interest affected in the same way (price and wage rigidity is assumed);
- Changes in the real rate of interest can only affect aggregate demand in the short run;
- In the long run changes in the rate of interest affect inflation only;

# The Economics of the New Consensus Macroeconomics

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- Phillips curve is vertical in the long run at NAIRU;
- NAIRU is a supply-side variable;
- Say's Law holds: the level of effective demand does not play an independent role in the long-run level of economic activity.

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# Economic Policy of the New Consensus

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- Inflation Targeting (IT) is embedded in equations 1-3;
- IT is a monetary policy framework whereby public announcement of official inflation target is undertaken;
- Equations 2 and 3 entail an important role for 'expected inflation';
- Credibility attained through pre-commitment to the inflation target without government interference;

# Economic Policy of the New Consensus

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- Transparency of inflation forecasts is a paramount element of the policy, and it enhances credibility; but...
- The centrality of inflation forecasts and the margin of errors represent a major challenge to this framework;
- These ingredients are supported by the publication of the minutes of the Central Bank's Monetary Policy Committee, by the Inflation Report and the speeches of the Monetary Policy committee members;

# Economic Policy of the New Consensus

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- Further important ingredients: Accountability; Credibility; and Individual Reputation of the Monetary Policy members, especially in those cases where minutes are published, which reveal outcome of voting;
- Fiscal policy is downgraded as an instrument of economic policy;
- Constrained discretion: neither pure discretion nor rules.

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# Assessing the New Consensus Macroeconomics

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## **Main Problems (Theory):**

- There are no banks or monetary aggregates in the model;
- The absence of banks in the NCM implies serious problems;
- Banks and their decisions play a significant role in the transmission mechanism of monetary policy;



# Assessing the New Consensus Macroeconomics

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- Decisions by banks as to whether or not to supply credit play a major role in the expansion of the economy;
- There is, thus, a disjuncture between this analysis and the role of monetary policy;
- Recent research has exposed these problems further:
- The 'standard' NCM model, with no banks and monetary aggregates, is compared with a similar 'enlarged' model, which is endowed by including banks that create deposits and make loans;

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- The results of these studies clearly show that money and the financial sector cannot be ignored;
- Indeed, it is credit that is most important;
- But then when bank credit is the main source of financing for firms, loan rates are of course important;
- Under such circumstances where the rate of interest on bank loans differs from the policy rate of interest,  $RR^*$  may not be a useful indicator for monetary policy;

# Assessing the New Consensus Macroeconomics

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- The equilibrium real rate of interest ( $RR^*$  in equation 3) is problematic;
- There is a great deal of uncertainty in view of its imprecise empirical value;
- Keynes (1936) in the *General Theory* explicitly rejects the idea of a unique natural rate of interest;
- Keynes (op. cit.) argues that there is a natural rate of interest corresponding to each level of effective demand, which would bring savings and investment into balance;

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- Price stability has been associated with benefits to the economies pursuing it; but there are problems:
- Price stability might not be sufficient to avoid serious macroeconomic downturns;
- And history is replete with examples of periods of relative absence of inflationary pressures followed by major economic and financial crises; best example is the recent financial crisis;

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## ■ **Main Problems (Policy)**

- IT, the main policy implication of NCM, is designed to tackle demand shocks, that is demand-pull type of inflation;
- Supply shocks, which produce cost-push type of inflation, cannot be handled by the NCM;
- The position taken by IT on supply shocks, is that they should either be accommodated, or that supply shocks come and go – and on average are zero and do not affect the rate of inflation;
- Nor do they impact on the expected rate of inflation.

# Assessing the New Consensus Macroeconomics

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- Insufficient attention paid to exchange rate:
- Exchange rate is not included in equation (3); only weighting it into decisions when setting interest rate;
- A strong real exchange rate contributes to 'imbalances' in the economy through its impact on the domestic composition of output: declines in manufacturing and exports, and increases in services and current account deficit, occur;
- There is, thus, the danger of a combination of internal price stability and exchange rate instability; should include exchange rate in equation (3);

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- Countries that do not pursue IT type of policies have done as well as those that are inflation targeters;
- Monetary policy used for short-term stabilization purposes but not fiscal policy (due to the Ricardian Equivalence theorem and crowding-out);
- Does IT work in practice as the theoretical framework suggest? Is monetary policy so effective and fiscal policy so ineffective (is the Ricardian Equivalence Theorem problem free)?

# Assessing the New Consensus Macroeconomics

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## **Further Problem: Absence of Environmental Issues**

- Environmental issues are not properly dealt with by the NCM, an approach inherited from Neoclassical economics;
- More precisely, it derives from the traditional notion that in the production process just those goods that can be produced and exchanged are suitable to be part of the relevant production process;



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- As a result, in this paradigm there is room just for only two type of goods: those goods that can be produced, and those that can be sold in the market to consumers who are willing to pay for them;
- NCM is concerned with evaluating marginal changes, and the tradeoffs involved in substituting one for another;

# Assessing the New Consensus Macroeconomics

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- According to this doctrine there is the possibility of adequately substituting natural resources by human-made elements;
- And market forces can adequately deal with environmental issues;

# Assessing the New Consensus Macroeconomics

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- However, in terms of climate change any such market feedback loop would be both too slow (to the point of irrelevance), and would still depend on government policy to link impacts to emissions;
- Clearly, all these assumptions and issues preclude any deal of the NCM with environmental issues;

# Assessing the New Consensus Macroeconomics

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- Another NCM assumption, which does not conform with the environmental perspective, is the existence of a representative agent;
- The economics of NCM is concerned with the representative agent in that s/he is expected to think in the continuum associated with incremental changes;

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- The representative agent is not concerned with the problems that relate to climate change and the risks of discontinuities and unknowns in the climate system and impacts that can/cannot readily be substituted by economic inputs;

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- It is clear then that for the NCM there is no room for preoccupation with implementing environmental policies, such as actions to mitigate CO<sub>2</sub> emissions to achieve sustainable growth, since their outcome cannot be taken on board by the representative agent;
- In general terms, individuals cannot be aggregated by assuming that all of them have the same spectrum of preferences and they will act according to the same pattern;

# Assessing the New Consensus Macroeconomics

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- This idea, which is applicable to any economic issue, is more relevant in the case of environmental issues;
- This is so since the reaction to environmental changes varies enormously between individuals depending on features as age, economic status, culture, economic activity, etc;

# Assessing the New Consensus Macroeconomics

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- A key assumption of the NCM that causes it to ignore environmental issues is the premise of perfect information;
- It is quite obvious that this kind of knowledge is far from being perfect;
- How are individuals going to form rational judgments about the future in the context of such degree of uncertainty and ignorance?
- In this context, the notion of rational expectations loses its validity;



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- In a significant contribution on ‘the potential impacts of climate change’ Stern (2013) suggests that “The economic models add further underassessment of risk on top of the underassessment embodied in the science models, in particular because they generally assume exogenous drivers of growth, only modest damages from climate change and narrow distributions of risk” (p. 839) are considered;

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- Such models that assume either away such risks or minimising their magnitude “may be profoundly misleading on issues of great significance” (p. 839);
- It should be noted that this is not to suggest that other paradigms have accounted fully for environmental issues;
- Progress has been made but a great deal more is necessary as Stern (op. cit) has demonstrated convincingly;

# Assessing the New Consensus Macroeconomics

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- Grubb (2013) also makes a similar and relevant point: “traditional economics offers useful and important insights into major parts of the problem. For understanding the grand challenges, however, its normal tools and assumptions are just hopelessly out of their depth” (p. xx).

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## Further Problem: Microfoundations of Macroeconomics

- We begin by noting that the incorporation of microfoundations in macroeconomics is thought loadable, and has contributed to a better appreciation of economics;
- However, there is the question of whether they are the correct microfoundations and no serious problems and weaknesses are present;

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- These are important issues in view of the assumption of the 'representative agent' model and its implications;
- We may use the example of the representative consumer to make the point;
- The representative consumer is assumed to maximise her/his utility function subject to the budget constraint in order to derive her/his demand function;

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- This individual demand curve is utilised as the exact specification of the aggregate demand curve;
- But such requirement is clearly a major weakness of the 'representative agent';
- This is so since the macroeconomy is studied not by working out theories regarding how aggregate economies behave, but rather by working out theories regarding how an individual behaves and transferring these rules of behaviour to the aggregate level;

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- A further implication of the representative agent assumption is Keynes' (1936) 'fallacy of composition';
- And to quote Samuelson (1948) on this issue: "What is true for each is not necessarily true for all; and conversely, what is true for all may be quite false for each individual " (p. 9);
- Clearly, the use of the 'representative agent' in macroeconomics amounts to a restatement of the 'fallacy of composition';

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- Another problem is that the assumptions required to derive equation (1) from the representative agent are highly restrictive;
- Indeed, these assumptions cannot be acceptable as sound microfoundations;



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- It is thereby clear that the problem of the representative agent model is that it does not bypass the aggregation problem;
- This is so because it is not possible to provide a consistent and satisfactory model of the macroeconomy by using a representative agent model;

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- A related and relevant proposition is that microeconomics and macroeconomics are related ‘horizontally rather than vertically’. In this sense Peston’s (1959) proposition that “macrotheory and microtheory are seen to be complements not substitutes” (p. 61) is relevant;
- Or, indeed, and as Kliesler (1996) puts it, “micro and macro stand side by side, with important feedbacks between them” (p. 66).

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- In this context the relevant statement of Solow (2008) is very apt: the NCM emanates “from a model in which a single immortal consumer-worker-owner maximizes a perfectly conventional time-additive utility function over an infinite horizon, under perfect foresight or rational expectations, and in an institutional and technological environment that favours universal price-taking behaviour. In effect, the industrial side of the economy

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- carries out the representative consumer–worker–owner’s wishes ..... It is taken as an advantage that the same model applies in the short run, the long run, and every run with no awkward shifting of gears. And the whole thing is given the honorific label of ‘dynamic stochastic general equilibrium’” (p. 243).

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# Summary and Conclusions

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- We have highlighted the theoretical framework and the policy implications of the New Consensus Macroeconomics;
- We have also provided an assessment of this paradigm, with two problems having been particularly emphasised: the absence of environmental issues, and the microfoundations of macroeconomics;
- More serious research is desperately needed on the current state of macroeconomics and economic policy.