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The role of the state in neoclassical economics

I. Introduction

Thanks to the fall of communism in Eastern and Central Europe, neoclassical economics has swept across this regions economics departments, and effected many economists like an epidemic. What happened to a large degree — and here L. Balcerowicz can be seen as an example — was simply the (deliberate?) mixing up of neo-liberal ideology and neoclassical economics. Or better: the justification of primitive neo-liberal notions with neoclassical economic theory.

The argument of this paper is that this procedure is unacceptable. It first sets out to look at the expression "neoclassical" in general, dividing it into "old" and "new" microeconomics. Secondly, the (potential) role of the state is discussed in these microeconomic areas. The conclusion with regard to old microeconomics is along the lines of J. Stiglitz, i.e. the end of communism should be taken as a refutation of neoclassical economics. While the conclusion for new microeconomics hinges on the fatal methodological fault that one is capable of modelling everything. If one can explain everything, one has explained nothing. Thus, in new microeconomics, one can model any role or non-role for the state.

II. New and old microeconomics

Neoclassical economics is *marginalist* economics. Consumers maximise utility, producers maximise profits. It is the economics which followed the Marginal Revolution of 1870, notably propagated and refined by A. Marshall and L. Walras. It can be found in any introductory economic textbook and needs no further elaboration. However, it is common to stress the difference between Marshall and Walras. While Marshall focused on partial equilibrium, Walras worked on general equilibrium. And thus, it is often believed, two strands of neoclassical economics developed. M. Blaug, for example, is happy to accept partial i.e. Marshallian analysis, discarding general equilibrium analysis (for example Blaug 1997, p. 557). This is of course unacceptable, as both are two sides of the same coin. Marshall recognised this himself and thought of his own work as a realistic representation of the Walrasian system[1].

General Equilibrium theory (GE), sketched out by Walras and developed by Arrow – Debreu, works — as it is well known — with perfect competition and its many stringent assumptions. It is a theory with an assumed complete set of perfect markets. There is thus *a priori* no reason why the state should play a role.

The opposite holds in the case for an assumed market failure (imperfect competition or an externality for example). As long as the cost of state intervention is less than the gain of having rectified the market failure, the state has clearly a role to play. This is the research avenue taken by, for example, Public Sector Economics. A look into the leading textbooks suffices to convince that this branch of economics starts with the assumption that we do not live in a world without market failures[2].

These two alternatives: assuming perfect markets or assuming market failures summarise the spectrum of "old" or traditional microeconomics. Below under III. we will focus on the perfect, frictionless world of GE.

"New" microeconomics can be dated back to the beginning of the 1970's, starting with the famous G. A. Akerlof (1970) and M. Spence (1973) articles. Akerlof introduced a constraint on information and Spence modeled a search cost. This development can be seen as changing one of the assumptions of perfect competition at a time. What followed was the development of a myriad of microeconomic models. The use of game theory made it possible to construct models for each conceivable situation. Modern industrial economics is characterised by this. We will look at the role of the state in this branch under IV.

However, the question might arise, why new microeconomics is seen as neoclassical economics. The reason is methodological. New microeconomics is a development out of neoclassical "old" microeconomics. The hardcore assumptions[3] are best of all modified, not overthrown. Despite some modeled anomalies, consumers are still seen to try to maximise utility, producers profits — whatever assumed (or modeled) situation they might find themselves in.

1 A. Campus (1987, p. 321) writes: "It is of particular importance to note Marshall's statement in a letter to J.B. Clark in 1908: 'My whole life has been and will be given to presenting in realistic form as much as I can of my Note XXI'. [...] Note XXI' of his *Principles* is — except for the treatment of capital-substantially Walras's general equilibrium system, generalized for variable coefficients".

2 See for example Brown and Jackson (1990) or Stiglitz (1986).

3 A "hardcore" consists of metaphysical beliefs, and is treated as irrefutable by the scientists working within a scientific research programme (to use the language of Imre Lakatos), or

The microeconomic issues discussed here have a clear mirror-image in macroeconomics. New Classical Macroeconomics starts with perfect competition and a GE world (see Heusinger 1995), while New Keynesian Economics looks at market failures (imperfect competition, externalities, etc.) and shadows current developments in new microeconomics (see Heusinger 1997). Let us now look at the role of the state in these two parts of neoclassical economics.

III. The role of the state in "old" microeconomics

It was pointed out above, that the focus will be on an economy characterised by perfect competition, without frictions, i.e. the General Equilibrium set-up. Consumers maximise utility, producers profits, given their initial endowments plus the underlying neoclassical assumptions such as rationality, perfect information, etc. Given such a set-up, it can and has been proven, that such an competitive economy is V. Pareto optimal. Pareto optimal meaning simply that no one can be made better off without making someone else worse off[4]. This statement, that every competitive economy is Pareto efficient is also known as the First Fundamental Theorem of Welfare Economics.

The way to criticise it is simply to attack its assumptions, such as perfect competition, perfect information or the existence of a complete set of markets. This would be nothing but arguing that there might be market failures, i.e. one has to modify the assumptions, and not surprisingly, the end result changes.

However, if we do not want to follow this road, is there any way to argue for the supremacy of the state (a role for the state) in such a setting? One simple and powerful argument can be made. It has been made by K. Arrow himself. As Arrow (1987, p. 72) pointed out, in neoclassical economics, given its requirements on rationality and information (processing),"... the superiority of the market over centralized planning disappears"[5]. In other words, it is more efficient if one economic agents does all the information processing (say, the

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paradigm (Kuhn). For a methodological introduction to these notions see Blaug 1992, pp. 32—37.

[4] In introductory textbook jargon Pareto optimality is described in the following way: „Under perfectly perfect competition, where all prices end up equal to all marginal costs, where all factor-prices end up equal to values of marginal-products and all total costs are minimized, where the genuine desires and well-being of individuals are all represented by their marginal utilities as expressed in their dollar voting — *then* the resulting equilibrium has the efficiency property that 'you can't make any one man better off without hurting some other man' " (Samuelson 1967, p. 609).

In mathematical jargon, Pareto optimality translates of course into:

1. $MRS^{1}_{21} = MRS^{2}_{21} = P_1/P_2$
2. $MRTS^{1}_{LK} = MRTS^{2}_{LK} = -dL/dK = r/w$
3. $MRT_{21} = P_1/P_2 = MRS$

state) instead of all of them doing it. Thus, there is a potentially powerful role for the state — or indeed even a central planner — in traditional neoclassical economics.

It should be noted that as early as 1908, Pareto and Barone had argued that the same economic reasoning should and could be applied to both, capitalism and socialism[6]. In other words, the three conditions necessary for Pareto optimality could be fulfilled in capitalism and socialism. Moreover, the Second Theorem of Welfare Economics asserts that every Pareto efficient allocation can be attained via competition if one starts at the right initial endowment distribution. This has been the theoretical justification for much of Western European style of market socialism as practiced until the 1980's by countries such as France and Greece. The idea was to redistribute income and to let the market work thereafter, so that the desired income distribution would appear. Besides the obvious difficulties of translating and relating a highly theoretical and artificial construct, such as a GE world into real-world economic policies, it was nevertheless used as the theoretical background to justify ones ideology. Again, what should be noted is that out of a purely competitive set-up we can derive some role for the state. In other words, neoclassical economics in its most perfect guise cannot be used as justification of arguing against any role of the state. Neoclassical economics as such does not support a *laissez-faire* ideology. On the contrary, as argued above by Arrow, state planning might be more efficient in such a perfect neoclassical world.

Of course, this is not a new insight. However, it is often forgotten that O. Lange argued about these points as long ago as the 1930's. He rightly suggested that a socialist economy could — theoretically — imitate a competitive economy and arrive at a Pareto efficient outcome. This debate is known as the Great Calculation Debate. Lange's opponent von Mises and later von Hayek lost the debate, as they could only revert to a critique of the assumptions of neoclassical economics. They stressed the information processing capacities as well as incentive structures, etc. Today, this branch of economics parades under the name of Austrian Economics. Within neoclassical economics, however, O. Lange won his argument and the theoretical debate[7].

This is of course only the theoretical side of the story. Lange's market socialism might not have any practical relevance or implication. Something which he saw himself, as he finally endorsed the Soviet planning system[8]. Similarly, neoclassical GE reasoning might not have any relevance to actual

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5 Arrow continues: "Each individual agent is in effect using as much information as would be required for a central planner. This argument shows the severe limitations in the argument that property rights suffice for social rationality even in the absence of a competitive system".

6 See for example Samuelson 1967, p. 617, Fn. 7.

7 For a review of the Great Calculation Debate see Vaughn 1980. An attempt to rescue von Mises argument was made by Murrell 1983.

capitalists economies, as these are typically not characterised with a complete set of markets, perfect information, etc. A statement far more difficult to swallow by today's mainstream economists. Given that these often seem to argue about a world where the marginal product of labour equals the wage; i.e. a perfectly competitive world!

There is no denying, that it is a fact that most experiments of the market socialist type (France, Greece) have failed and have been given up to a large extent. This was clear at the beginning of the 1980's. At the end of the decade the type of communism or socialism (what ever one wants to call it) in Central and Eastern Europe collapsed. This is interesting from an empirical point of view, as both types of economies had their theoretical blessing from neoclassical economics. From this point of view it is hard to understand how neoclassical economics could attract such a following among Eastern European economists.

J. Stiglitz uses these findings in order to mount a massive attack against neoclassical economics. Thus, Stiglitz concludes (1994, p. 2) that "the failure of market socialism serves as much as a refutation of the standard neoclassical model as it does of the market socialist ideal".

To conclude, let us look at a quote by I.M.D. Little, who wrote more than 40 years ago a classic in welfare economics (Little 1957):

"We may sum up our discussion of the political implications of pure static welfare theory. We do not believe that it can be reasonably and honestly used in defence of, or against, any particular political system. [...] In my opinion, static welfare theory could only convince someone who was blind to realities, and very susceptible to emotive language, of the benefits of socialization. Equally, it could only convince someone who was similarly blind, and open to suggestion, of the benefits of *laissez-faire*. [...] These conclusions are reached in the face of the fact that the theory has been persistently used, by all sides, as a political weapon" (Little 1957, p. 273).

IV. The role of the state in "new" microeconomics

It was argued above, that new microeconomics commenced by loosening some of the assumptions of neoclassical economics. What happens if not all economic agents have the same information? Or if there exists an additional cost in obtaining information? In addition to these questions game theory was introduced into modelling. Problems could now be "set-up", situations could be defined and by applying economic rationality one could solve them. Or simply content that every outcome would be possible and as such an equilibrium.

[8] This has been argued by Pribam 1992, p. 861 with reference to Lange 1949.

The advantages of this type of modelling are that one can look at real world situations and apply economic rationality to predict what might happen. The opposite is however the more tempting one: to look at a real world outcome and to model *how* one arrived at this outcome. In other words, to rationalise outcomes. The obvious methodological charge is one of arbitrariness. The main problem, hinted at above, is that there is no clear central message, no overall framework which appears to be forthcoming. Anything can be the result of these models, depending solely on one's "assumption-melange". M. Blaug once used the phrase "cookbook econometrics" (Blaug 1992, p. 241), new microeconomics with its myriad of models and outcomes might be called "cookbook economics". The combined uselessness in the sense of the irrelevance of "cookbook economics plus cookbook econometrics" might highlight the state of mainstream economics. Furthermore, R. Goldfarb (1995, pp. 211—213) collected economic debates which were first supported by empirical evidence, later refuted and this often after a contrary theoretical argument had been established.

Microeconomists have started to recognise this problem, specifically in the case of game theory (see for example Sutton 1990, Fisher 1989, Peltzman 1991), as it became clear that one can model nowadays almost anything. J. Sutton argues:

"The elaboration of multistage games allowed a tremendous degree of flexibility in modelling. [...] given any form of behaviour observed in the market, we are now quite likely to have on hand at least one model which 'explains' it — in the sense of deriving that form of behaviour as the outcome of individually rational decisions. [...] This richness of possible formulations leads to an embarrassingly wide range of outcomes supportable as equilibria within some 'reasonable' specification. [...] In 'explaining' everything, have we explained nothing?" (Sutton 1990, p. 506/507).

S. Fisher argues that the simplicity of exemplifying theory might be illuminating, but that it lacks generality. "The very stripping down of the model that makes it easy [...] to see what is going on also prevents us from knowing how the result will stand up in more general settings" (Fisher 1989, p. 118). It is often the case in game theoretical models that they arrive at strong, unintuitive results. However, once one loosens one of the fundamental specifications of the game, the result of the game changes dramatically. With regard to macroeconomics, L. Summers has argued that:

"An infinity of models can be created to justify any particular set of empirical predictions. And I suspect that there is a meta-theorem that any policy recommendation can be derived from some model of optimizing behavior. What then do these exercises teach us about the world?" "I have argued that formal econometric work where elaborate technique is used to either apply theory to data or to isolate the direction of causal relationships where they are not obvious *a priori* virtually always fails" (Summers 1991, p. 144 and 136).

In view of this, what seems to be called for is a methodological criterion, which would make certain models more acceptable than others. An obvious criterion would be what I call "theoretical robustness".

To come back to the role of the state in new microeconomics, it should be clear that it has the role the modeler gives to it. According to the set-up of the game the state might play a role or not. Interventionists model therefore situations where the state plays a role, neo-liberal economists model the opposite. None of these approaches is theoretically or methodologically superior.

V. Conclusion

The conclusion, which arises is simply that neoclassical economics, in whatever guise, cannot decide definitely on the potential role of the state. To use neoclassical economics to argue against or for a role of the state remains arbitrary and without practical implications. It might be more persuasive to conclude by quoting once again J. Stiglitz:

"Imperfect and costly information, imperfect capital markets, imperfect competition: These are the realities of market economies — aspects that must be taken into account by those countries embarking on the choice of an economic system. The fact that competition is imperfect or capital markets are imperfect does not mean that the market system should not be adopted. *What it does mean is that in their choices, they should not be confused by theorems and ideologies based on an irrelevant model of the market economy*. Most important, it means that in deciding on what form of market economy they might adopt, including what role the government ought to play, *they need to have in mind how actual market economies function, not the quite irrelevant paradigm of perfect competition*" (Stiglitz 1994, p. 267; italics added).

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Rola państwa w ekonomii neoklasycznej

W artykule autor zwraca uwagę na różnice w neoklasycznym podejściu do mikroekonomii, z uwzględnieniem podziału na mikroekonomię „starą" i „nową". Prezentuje też potencjalną rolę państwa w obu tych ujęciach mikroekonomicznych.

„Stare" podejście opierało się na założeniu, że konsumenci maksymalizują użyteczność, a producenci — zyski w warunkach ogólnej równowagi, choć dopuszczano też możliwość wystąpienia równowagi cząstkowej. Teoria ogólnej równowagi miała zastosowanie przy założeniu istnienia doskonałej konkurencji, natomiast w takiej sytuacji nie ma powodu, by państwo miało do odegrania jakąś rolę w gospodarce.

W przypadku rynku niedoskonałego państwo może mieć pole do działania tak długo, jak długo koszty jego interwencji są niższe od zysku z tytułu korekty niedoskonałości rynku.

W „nowej" mikroekonomii, której początki sięgają lat siedemdziesiątych, zwrócono uwagę na istnienie utrudnień w niezakłóconym przepływie informacji i występowanie kosztów ich badania. Zastosowanie teorii gier umożliwiło skonstruowanie modelu ukazującego wpływ zmian każdego z założeń modelu doskonałej konkurencji na rozwój gospodarczy.

Oba ujęcia różnią się podejściem do roli państwa w gospodarce. W klasycznym podejściu, przy uwzględnieniu racjonalności działań konsumentów i występowania procesów informacyjnych, podkreśla się, że zanika przewaga wolnego rynku nad gospodarką centralnie planowaną, a zatem ekonomia neoklasyczna jako taka nie wspiera ideologii *laissez-faire*. Jednakże upadek gospodarki socjalistycznej w krajach Europy Środkowej i Wschodniej powinien zostać odebrany jako obalenie ekonomii neoklasycznej. Dowiodły tego również zakończone niepowodzeniem próby wprowadzenia gospodarki rynkowej typu socjalistycznego we Francji i w Grecji.

„Nowa" mikroekonomia staje przed problemem zbytniego uproszczenia modelu. Jeśli za pomocą jednego modelu można wyjaśnić wszystko, to nie wyjaśnia on niczego. W takim wypadku państwo odgrywa w nim taką rolę, jaką wyznaczą mu korzystający z tego modelu. Oznacza to, że państwo może aktywnie uczestniczyć w procesach gospodarczych lub nie. Zwolennicy interwencjonizmu modelują zatem sytuacje, w których państwo odgrywa jakąś rolę, neoliberałowie zaś postępują przeciwnie. Nasuwa się zatem wniosek, iż niezależnie od tego, czy jest to ujęcie „nowe" czy „stare", ekonomia neoklasyczna nie przesądza definitywnie o potencjalnej roli państwa w gospodarce.

Streszczenie artykułu
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