

Document de travail

Capitalism Dynamism: Efficiency and Fairness

N° 2009-25

Mario AMENDOLA
University of Roma La Sapienza

Jean-Luc GAFFARD
University of Nice Sophia Antipolis,
Institut Universitaire de France (CNRS-OFCE)

Capitalism Dynamism: Efficiency and Fairness

Mario Amendola* and Jean-Luc Gaffard**

Abstract

While in a perfect (Walrasian) world, fairness and efficiency are independent, and in an imperfect but static world, fairness hampers efficiency, it appears that, in an imperfect but changing world, the fairness is a condition for efficiency. However, focusing on incentives without considering the co-ordination issues of a process of change implies considering only one dimension of the impact of the distribution of income on global performance. This might hamper the viability of evolution, and hence total utility. In particular, it will be argued that an efficient co-ordination requires both rigidity or viscosity in wage adjustment and a not too strong income inequality. Fairness, viability and efficiency cannot be dissociated from each other.

JEL classification: D3, D6, I3

Key words: efficiency, equilibrium, fairness

1. Introduction

For many years, the so-called new economy has been celebrated as an economy where a higher and steady growth rate justified a possibly less egalitarian distribution of income, which was supposed to be the result of a skill biased technical progress. At the same time, capitalism was magnified as the incarnation of a society without any conflict or any trade-off between conflicting objectives. The current crisis puts an end to this vision. The huge change in the distribution of income that has been taking place in the last decades could be the ultimate cause of the turmoil, being the symptom of a breaking of co-ordination in the working of the system. This should point to policy mistakes that have prevented world's economies from fully adjusting to the unavoidable structural changes associated with technical progress and the extension of international trade, rather than to the consideration that capitalism is not viable per se. In this perspective, we shall see that efficiency, far from being the

* University of Roma La Sapienza e mail mario.amendola@uniroma1.it

** University of Nice Sophia Antipolis, Institut Universitaire de France, CNRS and OFCE e mail jean-luc.gaffard@ofce.sciences-po.fr

enemy of fairness in a capitalist economy, can be attained in the long-run thanks to appropriate economic policies. This is the main lesson of the golden age that has followed the Second World War in the Western countries. As a matter of fact, capitalism is submitted to recurrent structural changes and its survival depends on the way co-ordination takes place. Private (market) or public (policy) co-ordination will be successful when helping the harmonisation between supply and demand at each moment of time and over time, that is, when smoothing adjustment processes. This co-ordination consists in arbitrages between conflicting objectives, but also requires a harmonisation of interests, which ends in a fair distribution of income.

The remainder of this paper is structured as follows. Section 2 puts into light the capitalism's dilemma, which is not an 'efficiency vs. fairness' dilemma but a 'dynamic vs. static efficiency' dilemma. Section 3 introduces an evolutionary perspective that focuses on the way economies work out of equilibrium: which allows to deal with the capitalism's dilemma. Section 4 stresses the co-ordination issues that are at the heart of innovation processes as out-of-equilibrium processes, and leads to revisiting the nature of the issues to be faced by capitalist economies. Section 5 underlines why and how distribution rules matter when institutions, instead of being designed for producing better incentives for presumed optimal choices, are aimed at making processes of change viable. Section 6 establishes the implications of the argument for the relation between functioning of the market and role of the State, putting into light the necessary arbitrages between conflicting objectives. Section 7 concludes by evoking why institutions and rules should evolve in the perspective of maintaining the social cooperation and the necessary subordination of efficiency to fairness.

2. The Capitalism's Dilemma

The static efficiency properties that are stressed by standard welfare economics are not the most important qualities of capitalist economies. What differentiates the prototype capitalist economy most sharply from all other economic systems, and is the main reason of the historically unprecedented growth rates of the industrialised market economies, is the continuing process of innovation (Baumol 2002). "The prime weapon of competition is not price but innovation" (ibid. p. ix). Understanding the innovation mechanism is crucial for understanding the dynamism of capitalism.

One of the main problems, in this context, is whether social norms actually determining distribution patterns affect incentives to innovate.

Within a walrasian equilibrium framework, distribution of primary incomes is determined by the properties of the production function, that is, by pure technical conditions. Redistribution rules have no impact on the choice of techniques, that is, they do not affect the productivity level, provided that consumer tastes do not change. The techniques chosen are those allowing higher returns, whether these returns are finally appropriated by capitalists or distributed in a given way to wage earners. As a matter of fact, “welfare economics (...) has repeatedly leaning on a fairy tale: the legend that one can somehow aim for efficiency in the allocation of resources to the growth process, and afterwards rectify any resulting damage to the desirable distribution of wealth and income by means of what so called ‘lump-sum’ redistributions of income and wealth – forms of redistribution that somehow have been cleansed of all incentives or disincentives effects” (Baumol 2002 p. 122). In this view, efficiency is divorced from fairness. It follows that it may be contradictory to speak of crisis of the welfare state, that is, to criticise the welfare state for not being compatible with innovation and growth, as it is customary nowadays, and hence to call for less welfare state. From a strict walrasian viewpoint, efficiency, we have just seen, may be compatible with any given social norm. The equity of distribution is a matter of ethics and, as such, is none of the economist’s concern. However we are not in a walrasian world.

When incentives (the expected results from an innovative choice associated with a given institutional set) determine the amount of R&D spending and, through this way, the amount of productivity gains, less expected results from individual actions may generate less R&D spending and hence less productivity gains. Thus, a redistribution of these gains at the detriment of innovators could reduce the gains themselves. In other words, efficiency can no longer be separated from fairness and a trade-off is established between them. More inequality would in fact be required for obtaining a higher growth rate.

If we push this viewpoint to “the most extreme case – that the spillovers from innovation are reduced to (anywhere near) zero – the living standard of the vast majority of the citizens of today’s rich countries would have stalled at the pre-Industrial Revolution level” (Baumol 2001 p. 280). However, “one can hardly accept

the notion that it would be socially preferable to achieve a total GDP that is far higher than today's through enhanced incentives for innovation, while the bulk of population is condemned to near medieval living standards" (ibid). This is neither socially nor economically acceptable.

This trade-off between equality and growth reflects a view of innovation and its relation to growth, derived from the orthodox equilibrium version of the theories of production and technical progress, which stresses the *right choice* of the technology – that allowing the higher returns - as the crucial factor of growth. Institutions and the market are asked to provide the incentives for this choice, and in this sense we can define optimal institutions and optimal market forms. 'Primary' innovations, which introduce new products and, if successful, have higher returns, are risky. In particular; institutional arrangements should provide a proper transactional framework. This is not the case, e.g., if these arrangements produce distortions in the bargaining process and allow some agent or factor to obtain 'undue' quasi-rents, exceeding the value it has really invested, to the detriment of another. For example, when the rules that govern the labour market make labour the 'appropriating factor', this will lead to the choice of a technology that economizes this factor and as a result "job creation will be insufficient and labour will be forced into an increasingly crowded pool" (Caballero, Hammour 1999 p.12). Moreover, the same poor institutional environment will result in a sort of "technological sclerosis", permitting "outdated, low-productivity units to survive longer than they would in an efficient equilibrium" (ibid. p.20).

Our conjecture is that spillovers and redistribution affect substantially the growth process: not in relation with the incentives to innovate, though, but because they appear as viability conditions of the growth process itself. As we intend to show, out-of-equilibrium adjustments concerning distribution rules should be carried out in such a way as to allow the changing economy to be viable. In this light, adequate 'distribution rules' appear as the complement of efficiency, that is, as an essential element for actually capturing the increases of productivity or variety gains potentially contained in new technologies. Summing up: while in a perfect (walsrasian) world, fairness and efficiency are independent, and in an imperfect but static world, fairness hampers efficiency, it appears that, in an imperfect but changing world, the fairness is a condition for efficiency.

3. An evolutionary perspective.

Giving a robust content to this conjecture requires a change of perspective with respect to the standard view of the relation between innovation and growth. The latter relies on a definition of the process of production and technology that relates inputs and output on the basis of a given relation defined *ex ante* by technical conditions, and hence determines returns and productivity as the expression of these conditions. In this view both productive capacity and its adequate utilisation are the automatic (immediate or delayed) result of a simple *choice* rather than of a process that has its own evolution and might or might not come to a given end, or to an end at all. The existence of problems of co-ordination, which might hamper the effective appropriation of the potential returns of technology, is excluded by assumption. Only price rigidities can prevent an adjustment (for example, of the capital-labour ratio) in the right direction.

This is possible only in equilibrium, though. In fact, it is only in equilibrium that we can count on an established relation between the basic magnitudes (output, employment, capital) of the production process, and hence can we reasonably define a technique as we usually define it, that is, in terms of given production coefficients expressing that relation. Only then, on the other hand, can the returns of a given technology, and its productivity, be verified.

Within an evolutionary framework, technological opportunities do not imply productivity gains as the result of a simple choice. The gains of technology (the source of growth) can only be obtained through a *process* that makes it possible (or not) to transform changes in technology into changes in productivity. Innovation by definition means the breaking of a given equilibrium. It implies the disruption of a given productive structure, and of the established way in which it operates, and the construction of a new and different one (Amendola and Gaffard 1998). This is in the nature of an out-of-equilibrium process, which can be successful or fail. It brings about in fact co-ordination problems not only at the innovating firms' level but also in relation with the environment. As a matter of fact most innovations are the result of new forms of co-ordination among several firms and institutions rather than of the independent actions of single dominant innovating firms. Thus the construction and the effective operation of the productive capacity that will make it possible to actually take advantage of the returns of the new technology requires to understand "how the innovating firms acquire, accumulate and develop knowledge other than scientific and

technical knowledge which is material to innovation, (namely) knowledge about the specific characteristics of customers and markets, which in turn has wider connections to knowledge about economic, social and regulatory changes” (Metcalf 2000, pp. 148–9). This is actually achieved “by means of several firms (or other institutions) contributing various technical, marketing or production resources, and co-ordinating the deployment of those resources in the innovating process” (ibid.). In other words, it requires solving a wide gamut of internal and external co-ordination problems.

4. What co-ordination?

Thus, co-ordination is essential for dealing with out-of-equilibrium processes. The role of institutions and the market is to assure this co-ordination. But what do we mean exactly by co-ordination?

In the modern theory of the firm the co-ordination mechanism is a strategic game based on a system of incentives leading to the *right choice*. Incentives are nothing but the expected results from the introduction of a new technology. They reflect both the intrinsic characteristics of technology, the market conditions (the prevailing information structure, the nature of strategic interactions, the market structure as determined by optimising behaviours) and the institutional rules. As already mentioned, within this framework, bad institutions lead to choose an inferior technology.

Once again, this is so in an equilibrium context. However, incentives are much more difficult to determine out of equilibrium, as is the case when we are dealing with a process of change over time like innovation. Co-ordination issues cannot be dealt with *ex ante*, as with the strategic game approach. As a matter of fact, while it is possible to define *ex ante* the inputs of innovative activities the same is not possible for its outputs: “technologists and managers are still not able to make accurate predictions about the emergence and acceptability of major new products, about the technical performance of newly designed artefacts, about the costs or time to develop them, or about the size of market for specific innovations ... As a consequence we are not able to explain fully and predict accurately either the technical performance of major innovations, or their acceptability to potential users (or even who the potential users are)” (Pavitt 2000, pp. 9–10). The choice set, in other words, cannot be exactly identified.

This makes it difficult to have a plain scheme of incentives. Since productivity gains reflect effective changes in productive structures, entrepreneurs should take into account the viability conditions of the process of structural change, rather than given properties of technology. Viability conditions, on the other hand, must be distinguished from optimality conditions. They refer to the ability of the economy to really capture the productivity gains that are potentially contained in the new technologies. As such they reflect the degree of co-ordination between supply and demand over time, while optimality conditions only refer to intrinsic properties of supply and demand, that is, of costs and preferences.

As a matter of fact different outcomes may be associated with a given technological advance, depending on viability conditions, that is, on the effective development of the process that will make it possible to transform this advance into actual returns in terms of productivity gains. The role of institutions and the market thus is not confined to produce the incentives to the *right choice*. To re-establish the co-ordination that assures the *viability* of a systemic structural change is a much more complex task.

5. Making the process of change viable

The type of institutions and the form of the market adequate to this task are not predefined and will only emerge as the result of the process of structural change, if this is successful. The same is for rules and social norms. These must not be defined in view of targets given beforehand but aimed at making this process viable. In particular, as we shall see, they must contemplate *arbitrage procedures* that make different objectives consistent with each other.

Thus out of equilibrium social norms interfere with the (innovation) growth process. Efficiency is not divorced from fairness but strictly related to it. However, this relation must not be taken in the wrong way. As is the case when a fall in the growth rate following the breaking of a given equilibrium is reckoned not to allow maintaining an unchanged distribution pattern. The negotiation that takes place as a consequence is aimed at changing the pre-existing distribution pattern on the (wrong) assumption that this is the reason of the fall in the growth rate. This bargaining usually results in a stronger segmentation between those taking advantage of and the increasing number of those excluded from the welfare state, with the appearance of strong rents that are actually a brake on the growth process.

As a matter of fact, the current crisis of the welfare state is not due to the obsolescence of the existing social norms, seen as an obstacle to the proper functioning of the market required by the emerging of new technologies, as the common consensus goes, but to co-ordination failures caused by wrong policies that result in too low a rate of capital accumulation. The implicit acceptance of this constraint to growth – as opposed to the attempt to relax the constraint itself - leads to claims that are actually out of tune with the existing situation. In particular, in a stagnating economy it appears rational for the beneficiaries of the welfare state to claim employment sharing and a reduction in working hours. But this is not rational at all. As a matter of fact, the latter policy actions do not reduce unemployment. Moreover, they are the exact opposite of what is required for stimulating growth. Defensive attitudes only lead to regressive economic processes, like the emergence of rents positions mentioned above. In these circumstances, “apparently, free-market proponents have gain from a coalition with advocate of social insurance and social assistances. ‘We’ll vote for your social-security pensions, your medical insurance, and the rest if you support us in opposing subsidies and regulations’. Where this coalition has triumphed, where welfare outlays explode but free market reigns, the social effects have been devastating: cities in desperate need of subsidies from the center to provide a decent home for culture, sciences with insufficient subsidies to fund much basic research and low-end workers without the subsidies needed to help enable them to participate in society’s business and support themselves their work. And these effects will worsen if the countercultures of dependency and nonparticipation draw more people from the values of civic responsibility and self-help” (Phelps 1997 p. 127).

The real problem is not the welfare state, the possibility of modifying or even keeping it or not. The real problem lies in co-ordination failures that engender the insufficiency of capital accumulation, and hence a slower growth or no growth at all, which will be overcome not by changing the social norms but by changing the economic policy followed.

To throw light on the issue we have to stress that what makes innovation and growth viable is the capacity to deal with the distortions associated with the process involved and the opening of new markets. In particular, this implies that disequilibria are part of the process and cannot be eliminated *ab initio* but just dealt with so as to smooth

them. To make an example, we have stressed that productivity gains are not the automatic results of the choice of a given technology: as a matter of fact productivity is likely to be reduced, before being augmented only when, and if, the process is successful. This is due to a dissociation in time between costs and proceeds, which implies a *temporary*¹ fall in the gross output of the economy, and hence, given a certain degree of rigidity of wages, an increase in the rate of unemployment (Hicks 1973, Amendola and Gaffard 2006). However, this is not a reason for reducing wages in response to a temporary excess of supply on the labour market, that is, to change the distribution rule, which is characterised by a downward rigidity.

In this context, a change in the distribution rule may be an obstacle to the viability of the process itself. It can in fact be shown that the viability of the process of innovation in a context characterised by a strong irreversibility of investment decisions and imperfect information requires some inertia in adjustment decisions (Amendola and Gaffard 1998, 2006). Keeping in mind that the success of a process of restructuring of productive capacity mainly depends on being able to smooth the fluctuations and the strong and extreme changes associated with this restructuring, the social norms required appear those apt to maintain a certain stability: e.g., in the price and wage system, so as to avoid excessive redistributions of income which might not only negatively affect the levels of demand and employment, but also create social unrest. Successful innovation may thus require an unchanged distribution rule rather than a higher remuneration for innovators. Social norms appear as a factor of inertia, which may be useful for making viable the process of change.

However, it would be a mistake to only pledge for inertia in the distribution of income. Also of great importance to co-ordination in the industrial age is the degree of inequality in the distribution of income and wealth. As a matter of fact the middle class are the main consumers of manufactured goods, that is, goods produced with increasing returns to scale. As is well known, the golden age – the years after the World War II – has been characterised in the US as well in the European countries by a more egalitarian distribution of income. We can easily make the conjecture that this distribution of income has positively influenced the potential growth rate: in fact, the

¹ As a matter of fact, as the innovation process successfully evolves, the productivity gradually increases and there will be room for wages increasing anew.

capacity to obtain the productivity gains, via its influence on the size and the composition of the final demand. In a regime of economies of scale or economies of scope, a large demand from middle class enables firms to profitably sustain mass production and capture huge productivity gains. In this context of increasing returns that create a problem of co-ordination between supply and demand, more egalitarian social norms would permit to better solve it and hence to obtain a higher growth rate. A typical example is China, where the excessively low level of income of the largest part of the population has made it necessary to carry out an export led growth strategy that resulted in a huge accumulation of savings. However, the global imbalances thus created are not sustainable, as shown by the problems that China is facing now as the result of the current global economic crisis. The only solution appears then an institutionally driven redistribution of income and the emergence of a middle class that will permit to solve the aggregate demand problem by changing the composition of demand. The joint example is the US where the huge increase of inequality in the distribution of income during the last decades has made indebtedness of the middle class the necessary but unsustainable condition of the growth process.

The current crisis adds a further dimension to the problem of the distribution of income and wealth: the coordination problems arising when societies become more articulated and complex. The standard representation of the economy focussing on capitalists, renters and workers and on financial assets essentially as the counter part of real assets has in fact become much more complex as the result of the emerging of new actors and of new spaces of discretion in their choices and decisions: with the consequence of a multiplication of coordination problems and the possibility of multiple and undetermined evolution paths of the economy. In particular, the increase in the number and variety of financial assets that only in a very small amount concern real productive phenomena has brought about an increasing dissociation between savings and productive investments.

There is the possibility of excessive savings, which subtract funds to final demand. On the other hand the transfer of this saving to the firms to finance their productive investments may be only partial, due to the number and the greater appeal of alternative forms of investment, e.g., existing wealth assets. In the last decades the great majority of advanced countries has been growing very slowly, while the values of the stocks of unproductive wealth have been growing much faster, signalling the

flow of liquidity towards speculative markets. When, as it is often the case, the fraction of the assets offered on these markets is lower than the corresponding demand, and their prices go up (capital gains), thus increasing their demand, the expectations of further increases and so on. This process has devastating consequences on the real economy. On one side it depresses productive investments, thus lowering the growth rate and creating unemployment. On the other, it increases greatly the inequality in the distribution of income, creating enormous spot earnings while on the same time impoverishing the middle and the working classes. The resulting fall in final demand further lowers the expectations of gains for productive investments thus bringing about a depressive spiral of the economy.

In this context policy dilemmas are inevitable. The actors involved in the process are numerous; the objectives pursued are various and must be made consistent with each other. This calls for arbitrations and trade offs, often between purely economic targets and social choices, as we shall see in what follows. Then, once (and if) the innovation process is successfully completed and the economy is stabilized, a given market structure and a given pattern of social norms (welfare state) emerge as those which have been consistent with the viability of the process itself. Of course, these may differ in different contexts. Thus, in the US, where inequalities are deeply rooted for historical and cultural reasons, these are accepted only if monetary and/or fiscal policy are systematically aimed at maintaining full employment, which thus appears as the main social norm. In continental Europe, more egalitarian for its historical and cultural heritage, social norms generally include a strong job protection and generous unemployment benefits, even when implying public deficits.

6. The Market and the State.

What are the implications of the above argument for the relation between functioning of the market and role of the State?

Abstracting from the extreme liberists advocating markets fully free of all regulations, all subsidies and most taxes – a credo strongly shaken by the current crisis - a certain role of the State in the managing of the economy has always been recognised by economists. However, this role has always been dealt with by considering the problem of fairness as separated from that of efficiency or contrasting with it. Thus Phelps (1997), evocating the Enlightenment model of classical economists that stresses free enterprise to achieve growth plus markets conditioned for the broadest participation,

recalls how even in this model a circumscribed government intervention is advocated to help enterprise and broaden opportunity, that is, to help enterprise to achieve growth. This leads Phelps to propose his recipe for dealing with the recent malfunctioning of West's economic system, consisting mainly in a severe decline of opportunity for low-wage workers and accruing inequality in the society. The reason of this phenomenon, in the opinion of the author, is the assault on private capital in the 1970s and the 1980s – making layoffs difficult, propping up inefficient firms, interfering with decisions pertaining to private business and expanding public sector jobs, all measures going against free enterprise – coupled with a reduction of employment subsidies, hiring subsidies and similarly intended de-tax initiatives that would help the market to favour inclusion. Just the opposite of the Enlightenment model. To go back to this model Phelps proposes in the first place to liberate enterprises, broadening privatizations and dropping restrictions on private capital in view of enhancing the growth of productivity. But “let's not pretend that free enterprise alone will shrink unemployment” The government is called in to provide “low-wage employment subsidies - continuing across-the-board tax credits to enterprises for their continued employment of low-wage workers” (ibid. p.126). Both efficiency and fairness are dealt with, but in a separated way, and the government comes in to take care of fairness once the market has been left free to promote growth.

The same dissociation characterises Day's view of the fundamental function of the government as “to bound and buffer change” (1998, p.127). In Day's opinion this function is to take care of the conflicts and social costs associated with the rapid change brought about by an efficient working of the market. Again, the market takes care of growth, and the government comes in to take care of its negative by products.

The role of institutions is more essential than that, though. It is not only to take care of the conflicts and social costs associated with rapid changes, but also to promote, co-ordinate and make viable these changes, by co-ordinating the decisions and behaviours of the economic agents involved in them.

This role, we have seen, comes to light when we focus on the economic structural process required to transform technological opportunities into productivity gains, that is, when we adopt an out-of-equilibrium analytical perspective. This implies, we have also seen, an interaction between fairness and efficiency.

Given the generally accepted economic objectives – growth, innovation, employment, and welfare – the first problem is to act so as to actually pursue these objectives. This implies not only an appropriate decision on the part of all the agents involved – the ‘right choice’ fostered by ‘adequate institutions’ in the dominant view – but also the ability to actually carry out this decision. Decisions are effectively taken on the basis of expectations, given the existing constraints. The more solid and reliable these expectations the higher the probability that the agents involved actually commit themselves to pursue given objectives. The presence of somebody having the power to set the way and the willingness to do so is essential for establishing reliable expectations, thus creating the environment conducive to the realisation of the intended objectives. This is a first way in which the State, in this sense, comes in. The strong and immediate steps to face oncoming events usually taken by the Federal Reserve and the Government of the United States (management of the interest rate, tax reductions, public expenditure programs,...) are examples of the effective presence of a State and its power and willingness to create an environment favourable to the pursuit of innovation, growth and employment.

Price stability, market flexibility and budget equilibrium – the assumed conditions of an efficient working of the market – are not likely by themselves to engage people in a growth process. What is needed is the belief that they are actually and concretely helped to carry out this process. These conditions will then appear more properly as the result of a growth process successfully carried out rather than a prerequisite of it. The reason for the less brilliant performance of European economies in recent times in comparison with the US is perhaps the fact of having taken these conditions, rather than the failure to realise them, as the first objective to pursue (thus misinterpreting the experience of the US). As a matter of fact, the main difference is the absence in Europe of an authority that is capable of sending the strong signals required to actually encourage the economic actors to engage in a growth process.

But more than sending strong signals is required for assisting the economic actors in actually carrying this process to a successful end. What is required is a continuous co-ordination of the different objectives pursued by the different actors to be made consistent with each other by means – we have already mentioned – of arbitrations and trade offs, often between purely economic targets and social choices.

Historically, the role of the Keynesian state consisted in promoting co-ordination at the global level between public administrations, managers of big firms and trade unions. In particular, what was at stake was to realise an agreement on the necessity of encouraging the development of big firms (the national champions) and on the necessity of augmenting wages in relation with productivity gains. A central co-ordination was adapted to an economy that faced reconstruction issues. This approach is no longer suited to an open and complex economy. In this different context, the role of the State becomes to facilitate cooperation between economic agents and arbitrages between conflicting goals.

Several arbitrages are necessary: between promoting efficiency and limiting market power, between protection and dissemination of technologies, between co-operation and competition, to name some of them.

Technological change as well as the enlargement of markets has made it necessary to change the regulatory framework. Public agencies are in charge of controlling or regulating these sectors. However, their activity should not be reduced to enforce a given rule implying for the concerned industry to be as near as possible to a full competition state. These agencies have to take into account not only the market power associated with an industrial configuration, but also the efficiency gains that the emergence of this configuration would permit. This arbitrage between conflicting goals must take into account both growth and distribution objectives: which, e.g., will be actually possible if these agencies, as is the case in the US, are obliged to periodically defend their choices and justify their policy before a commission of parliamentary assembly, called to arbitrate between various and different interests. As is well known (Baumol 2002), property rights are an essential element of the 'free market innovation machine'. But, on the other hand, "rapid dissemination is no minor matter for the efficiency of the economy's growth process" (p. 74). Thus, policy makers have to intervene in such a way as to avoid innovation - inhibiting effects of the spillovers without reducing the distributive benefits. It is the task of public authorities to promote this kind of arbitrage. Another main task of public authorities, when they have to sustain innovation and growth, consists in promoting co-operation among the firms that compete with one another on the same final market. As a matter of fact, there is a trade-off between co-operation and competition, which requires an arbitrage that only public authorities can do or impulse thanks to appropriate means.

This is, in particular, the sense of policy intervention aimed at promoting spatial clusters of firms.

7. Evolving Institutions.

In conclusion, the relation between efficiency and fairness, in fact the question of the dynamism of capitalist economy, is not simply a matter of incentives and hence of institutions that create the better incentives. Considering the nature of the evolution process leads to judge the efficiency of institutions on their ability to permit arbitrages that guarantee the viability of this process. In this perspective, fairness may appear as a condition of long-term efficiency.

This is the fundamental sense that we have to give to the principles that govern the welfare state. The latter is never uniform or optimal, because different institutions may allow the society to be viable and also because the institutions of the welfare state are not immutable and must evolve due that they have to face changing distortions in the economic and the social process. As a matter of fact, some rules that govern behaviours must be changed when they prevent necessary adjustments, that is, when, far from favouring a regular growth process, they create new distortions, including strong changes (i.e. more inequality) in the distribution of income and wealth. Once again, what is at stake is not the nature of incentives, but the co-ordination mechanism.

The view that subordinates efficiency to fairness is also held by Hicks who, with reference to wage regimes, maintains that “it is necessary for efficiency that the wage-contract should be felt, by both partners but especially by the worker, to be *fair*...but it is necessary, for it to happen, that the system of wages should be well established, so that it has the sanction of custom. It then becomes what is expected, and, (admittedly on a low level of fairness) what is expected is fair (1975, pp.64-5). And, more generally: “Any system of prices (a system of railway fares, just like a system of wage-rates) has to satisfy canons of economic efficiency and canons of fairness – canons which is very difficult to make compatible. So it is bound to work more easily if it is allowed to acquire, to some degree, the sanction of custom – if it is not, at frequent intervals, being torn up by the roots. This, I believe, is the true reason why inflation is damaging. It is most apparent in deterioration of industrial relations; but it is not confined to that field – it extends much more widely. It extends to many kinds of public arrangements – pensions and social benefits on the one hand, taxes and fines

on the other. In conditions of inflation these continually need re-fixing, so that issues which had seemed closed have to be reopened” (ibid. p.79).

Thus, fairness of social norms is also essential for the stability that, we have seen in the preceding sections, is often required for the viability of the evolution of the economy.

In this evolutionary perspective, it is no longer appropriate to assess economic policies within the utilitarian framework that focuses on the results that have been obtained rather than the ways for obtaining them. Indeed, this seems in accordance with the philosophy of justice developed by Rawls, who focuses both on the importance of individual liberty and on the necessity of the social cooperation. “Off-hand, it hardly seems likely that persons who view themselves as equals, entitled to press their claims upon one another, would agree to a principle which may require lesser life prospects for some simply for the sake of a greater sum of advantages enjoyed by others... In the absence of strong and lasting benevolent impulses, a rational man would not accept a basic structure merely because it maximized the algebraic sum of advantages irrespective of its permanent effects on his own basic rights and interests. Thus it seems that the principle of utility is incompatible with the conception of social cooperation among equals for mutual advantage ” (Rawls 1971, p. 13).

The difference between the Rawlsian vision of justice and the utilitarian view can be identified as follows. “As society experiments with successively larger doses of incentives, Rawls would have society stop once the ‘utility’ of the less well off person has peaked and would decline if incentives were strengthened further. But at that point the ‘utility’ of the better-off person would still rise with a further dose of incentives. So *total* utility must still climbing as incentives are increased at the point where Rawls would stop (...) It is the willingness of utilitarianism to sacrifice, to ‘trade away’, one person’s gain for the sake of another person’s gain that Rawls objects to – no matter that the latter gain is greater than the gain sacrificed, and that (of course) there was nothing personal about it” (Phelps 1985 pp 149-150).

We are going further by considering that justice in the Rawlsian sense is not only a moral, but also an economic principle. Because, out of equilibrium, focusing on incentives without considering the co-ordination issues might hamper the viability of evolution, and hence total utility. Fairness, viability and efficiency cannot be dissociated from each other.

References

- Amendola M. and J-L Gaffard (1998): *Out of Equilibrium*, Oxford: Clarendon Press
- Amendola M. and J-L Gaffard (2006): *The Market Way to Riches: Behind the Myth*, Cheltenham: Edward Elgar
- Baumol, W.J. (2001), 'Toward the Microeconomics of Innovation', in L.F. Punzo (ed.), *Cycles, Growth and Structural Change: Theories and Empirical Evidence*, London: Routledge.
- Baumol W.J. (2002): *The Free Market Innovation Machine*, Princeton: Princeton University Press
- Caballero R.J. and M.L. Hammour (1999), 'Institutions, Restructuring and Macroeconomic Performance', Invited Lecture XII World Congress of International Economic Association, August, Buenos Aires.
- Day R.H. (1998): 'Bounded Rationality and Firm Performance in Experimental Economy', in C.A. Mc Cann, G. Eliasson and C. Green (eds), *Microfoundations of Economic Growth: a Schumpeterian Perspective*, Ann Arbor, MI: University of Michigan Press.
- Hicks J.R. (1973): *Capital and Time*, Oxford: Clarendon Press.
- Hicks J.R. (1975): *The Crisis of Keynesian Economics*, Oxford: B.Blackwell.
- Metcalf J.S. (2000): Report CRIC (Centre for Research on Copmpetition and Innovation) Mid-term Review, Part 2 Research University of Manchester, ESRC.
- Pavitt K. (1998): 'Technologies, Products and Organization in the Innovative Firm: what Adam Smith tells us and Joseph Schumpeter doesn't', *Industrial and Corporate Change*, **7**, 433–452.
- Phelps E.S. (1985): *Political Economy*, New York: Norton and Cie.
- Phelps E.S. (1997): 'A Strategy for Employment and Growth: the failure of statism, welfarism, and free markets', *Rivista Italiana degli Economisti*, II (1).
- Rawls J.(1971): *A Theory of Justice*, Cambridge, Mass.:The Belknap Press of Harvard University Press. Revised Version 1999, Oxford: Oxford University Press.