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**BACK TO HETERODOX QUESTIONS:  
PROGRESS WITH REGRESS THROUGH  
COMPETITION**

**Javier Iguiñíz Echeverría**

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## RESUMEN

Riqueza y pobreza, progresión y regresión son tipos de realidad que se suelen relacionar en términos morales. Relaciones causales seriamente establecidas no son fáciles de encontrar. En este artículo nos proponemos recoger literatura económica reciente que, justamente, establece una relación de causalidad entre riqueza y pobreza. Nos referimos a la pobreza creada por los mismos procesos que crean la riqueza. No nos referimos, sin embargo, a un mero juego de 'suma cero' o a los que constituyen una redistribución directa como la que podría ser la asignación de los tributos estatales para fines de equidad o de inequidad. Estamos destacando las consecuencias de la competencia económica.

Las preguntas que nos interesan son conocidas. ¿Cuán fácil es hacer que "los mercados trabajen en beneficio de los pobres"? ¿Cuán conveniente es "crear mercados"? ¿Qué regulaciones resultan convenientes para evitar los efectos negativos del progreso que resulta de esa manera de progresar? Los materiales que presentamos no llegan a respuestas precisas pero ponen los términos más cerca de llegar a ellas.

## ABSTRACT

Wealth and poverty, progress and regress are the type of realities usually related on moral grounds. Scientifically serious causal economic relations are not so easy to find. Moral criteria does not require scientific proof of causality. But this search for causal links is also important to reduce the impact of structural factors on human behavior. Probably most of the times in a specific social structure creation of wealth implies a reduction in poverty. It is one or the other. However, both can also be seen as independent, and should be analyzed as parts of different processes. In that sense, it would be a question of one and de other. Finally, it is also found that, under some circumstances, progress, accompanied with increasing wealth for some collectivities and individuals can be analytically related to regress, and many times increasing poverty for other groups and individuals. It is progress with regress; that is regress actively created by progress, not just by default. The models presented below add new members to the group of theories that have attempted an analysis of these twin features of the competitive process. In other words, how many are regressing and become poor because they are losers, and not because they have not played, are not or have not been in the game?

All this is important to answer seriously to questions that are not being asked in spite of their obvious importance: How easy is to "make markets work for the poor"?, how convenient is to "improve markets"?, or to "extend markets"? Under what conditions it is better a market deepening? In what kinds of markets? Markets embedded in a complex set of components of the human dimension can accept a question different from: how to regulate the competition?

# BACK TO HETERODOX QUESTIONS: PROGRESS WITH REGRESS THROUGH COMPETITION

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## I. INTRODUCTION

In the field of international relations, and more specifically, when dealing with human rights, national security, environment protection, peace and democracy, economics has to be considered. Aggregate economic movements and structural transformations influence perceptions, hierarchies in values and priorities for action. There is no clear and direct connection between economic status and other aspects of human relation but, determinism aside, economics in its narrowest meaning of production and trading of things, matters. It is clear that it is not true that the traditional world of economics can be the starting point of social analysis, **the** independent variable; but it is also clear that has some internal coherence even though it is embedded in a more complex and deep set of human interactions. But, it is also true that the way some problems are conceived and defined, and also confronted, depends partly on the place a society, a group or an individual occupies in the global economy. However, that "place" has to be defined and explained as precisely as possible to make of the economic reality something useful in the analysis of those and many other related topics. In this paper I am going to suggest one way of introducing the economic factor, but without attempting any causal relation with the other aspects studied in this volume.

In this world of globalization, opening of national markets, privatization, deregulation and several other methods of extending the reach of the rules of the game of the human interactions that we call "market" it is interesting to note that the specific nature of market interactions is not usually introduced in a systematic way. Many times we find either a definition of market where nobody competes, as in the neoclassical approach, or one in which conspirative strategies by individual business leaders define outcomes. The economic place an individual or group occupies in the global economy is usually described in terms of his or her income per-capita; that is, of one of the results of economic activity. But it is less common to define the economic status in terms of the complex interaction between

facts that, being social, are out of control of economic agents, and decisions by these same agents. Either "laws" or "strategies" dominate unilaterally most of the analyses, and it is paradoxical, to say the least, that in a world that is becoming more difficult to control, it is the strategic aspect of the economic process that acquires preeminence in the theoretical literature. That is the new power of microeconomics. Regulation in this context is becoming the regulation of individual agents' behavior and not of market structures and processes that, in a significant measure escape them. A multilateral approach to regulation has to consider seriously this point.

## **II. PROGRESS WITH REGRESS**

The objective of this paper is to present in a non-technical manner some basic ideas behind new mainstream models that constitute a healthy reaction to the current unsatisfactory state of theoretical affairs. Heterodox thinkers, among them Schumpeter and Marx, but also Myrdal, Prebisch, and many others are directly and indirectly inspiring sophisticated neoclassical theoreticians in their effort to make theory relevant in a world of general unemployment, and I would add widening inequality. This inequality is not only the result of differences in velocity, of "backwardness", but also of the regress of those that lost in competition, once this process became more aggressive as in the 80s. In Latin America, the number of poor doubled in the 1980s; many non-poor became for the first time poor. It is perhaps this impoverishment of previously not poor, but also in the developed countries (Towsend 1993, 15) that has made of the inequality problem a more sensitive one. Inequality is, now more of a problem among culturally homogeneous human beings. In fact, homogeneity in non-economic aspects of life and inequality in the economic ones move together. As several forms of oppression recede, inequality moves ahead. As the World Bank had to recognize in his report on workers: "Divergence in incomes per capita is the dominant feature of modern economic history."<sup>1</sup> The United Nations Development Program presented

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<sup>1</sup> World Development Report 1995. Workers in an Integrating World. Oxford: Oxford University Press 1995, p. 53. The text continues in the same page: "By one estimate, the ratio of income per capita in the richest to that in the poorest has increased from eleven in 1870, to thirty-eight in 1960, and to fifty-two in 1985. This divergent relation between growth performance and the initial level of income per capital not only applies to those extreme cases but is empirically valid on average over a sample of 117 countries. Statistical analysis of growth in income per capita confirms the importance of initial levels: on average, countries that started richer grew faster."

some years ago impressive figures about changes in the 1970s and 1980s.<sup>2</sup> In Latin America, most of the countries studied by the Economic Commission for Latin America and the

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<sup>2</sup> (UNDP 92) Previous work on this international inequality can be seen in Senghaas 1985, 28-9; Bairoch and Lévy-Leboyer 1981; Kuznets 1966 among others.

Caribbean (CEPAL) show the same trend (CEPAL 1994, 35-45), and many of the best observers and analysts of Latin America evolution have recognized the importance of such extreme inequality. (Shehan 1987, 23; Cardoso and Helwege 1992, 19)

My expectation is that, although these models are far from constituting, separated or put together, a theory of the capitalist development process, they recognize the economic crisis, and the regressive component intrinsic to capitalist economic progress. Future debate will show how coherent they are, and how much explanatory power of current trends they have. In the context of the present volume I hope this paper will help providing materials to describe and understand some of the underlying structural justifications for multilateralism. If I am near what such multilateralism means, it has to regulate unplanned but systematic results of economic competition; among them, inequality at the regional and world levels, and not just individual behaviors of governments, firms or individuals.

This need for regulation of results is even more important due to the fact that in the economy success begets success, and failure, regress; and most of the times, poverty.<sup>3</sup> Academic answers to this cumulative causation problem have been there for decades but they are now appearing within the core of mainstream economics. I hope to show that future debate within economics will become more interesting. A leading example of recent facts recognition and theory adaptation to deal with them is the new endogenous growth theory.

"Although all less developed countries are affected by the worldwide economy, the effects are not uniform. For our purposes, the key observation is that those countries with more extensive prior development appear to benefit more from periods of rapid worldwide growth and suffer less during any slowdown. That is, growth rates appear to be increasing not only as a function of calendar time but also as a function of the level of development." (Romer 1986, 1012)

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<sup>3</sup> It must be obvious that I am leaving aside the crucially important environmental and other regressive aggregate effects of individuals' economic progress in an industrial world. In this paper, and in spite of them, I am assuming that this type of progress is, indeed, progress. Not industrial goods, but industrial competition is still, I think, the most decisive fact of activity relating economic interaction to inequality and poverty.

Wealth and poverty, progress and regress are the type of realities usually related on moral grounds. Scientifically serious causal economic relations are not so easy to find. Moral criteria does not require scientific proof of causality. But this search for causal links is also important to reduce the impact of structural factors on human behavior. Probably most of the times in a specific social structure creation of wealth implies a reduction in poverty. It is one **or** the other. However, both can also be seen as independent, and should be analyzed as parts of different processes. In that sense, it would be a question of one **and** de other. Finally, it is also found that, under some circumstances, progress, accompanied with increasing wealth for some collectivities and individuals can be analytically related to regress<sup>4</sup>, and many times increasing poverty for other groups and individuals. It is progress **with** regress; that is regress actively created by progress, not just by default. The models presented below add new members to the group of theories that have attempted an analysis of these twin features of the competitive process. In other words, how many are regressing and become poor because they are losers, and not because they have not played, are not or have not been in the game?

All this is important to answer seriously to questions that are not being asked in spite of their obvious importance: How easy is to "make markets work for the poor"?, how convenient is to "improve markets"?, or to "extend markets"? Under what conditions it is better a market deepening? In what kinds of markets? Markets embedded in a complex set of components of the human dimension can accept a question different from: how to regulate **the** competition?

The objective of this summary is not to provide a precise answer to this global problem but to select some of the competition mechanisms that help to understand the inner processes making difficult the extension of the benefits of growth and technical change to the whole population.

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<sup>4</sup> Regress does not mean necessarily impoverishment. It happens that failure in competition and obsolescence of human "capital" occur in contexts where a safety net is powerful enough to support a reduced but still a decent life. But in many underdeveloped countries failure to compete in a more aggressive context deepens already existing poverty levels and impoverishes many member of the "middle class".

### III. HETEROGENEOUS COMPETITORS IN A MOVING FIELD

Three aspects of the economic process are being recognized more and more as important in mainstream economic theory. First, is the heterogeneous power of competitors within an activity or market. Success and bankruptcy, entry and exit are part of reality with the same status. Second, the asymmetric effects on equality of the cyclical economic process. The worsening of equality in a recession is more important than the improvement, if any, in the recuperation. Third, the reallocative dynamics of the growth process and the asymmetric nature of the job reallocation process.

In the following lines I will touch upon three classic themes in heterodox thinking.

#### A. Heterogeneity among competitors

One of the most interesting developments in economic theory is the questioning of the relevance of homogeneity of firms within industries to understand competition. Cycles could be studied neoclassically by relying on the "representative firm" paradigm but at great cost when analyzing unemployment in recessions. In terms of the empirical analysis influencing contemporary theory, one of the most important studies, is the Timothy F. Bresnahan and Daniel M.G. Raff papers about the effects of the Great Depression on the motor vehicle industry.

"The partial diffusion of mass-production technology and related organizational changes formed the initial conditions for motor vehicles competition in the Great Depression. Those firms whose plants and organizations embodied mass production had a competitive advantage."  
(Bresnahan and Raff 1991, 330)

Another data-intensive work influencing model-intensive papers is presented by Davis and Haltiwanger. Here again, but looking to the problem of job reallocation along the cycle, a crucial feature is heterogeneity. For instance, behaviorally speaking:

"The magnitude and cyclical variability of gross job flows differs systematically across plants with different observable characteristics. On average, job reallocation rates are substantially higher among younger, smaller,

and single-unit plants. At the same time, job reallocation rates among these plants show no systematic cyclical variation; whereas job reallocation rates among older, larger, multi-unit plants show pronounced countercyclical variation." (Davis and Haltiwanger 1992, 861)<sup>5</sup>

At the theoretical level, this heterogeneity is being considered a critical feature of market competition (Diamond 1994) In countries with very high and fluctuating inflation rates, the adjustment at the firm level results, in some measure, automatically, that is, as a consequence of macro-developments. Although future analyses of job reallocation will be, with all certainty quite important, it would be necessary to consider changes in real wages as an alternative adjusting mechanism.<sup>6</sup>

Without heterogeneity there is no true capitalist competition. Obviously, it is only "when firm's costs differ [that] competition can play an important role in **selecting** more efficient firms from less efficient ones" (Vickers 1994, 14) Ruin is a common outcome and may lead to extreme poverty in many of those cases where the competitor is already poor. Regress, and may be ruin, is part of a selection process. "Competition also provides the basis of **selection**, of deciding who has a comparative advantage in performing a particular task." (Stiglitz 1994, 161)

Contests are processes of selection, and are based on incentives; what matters is relative performance, not absolute. (Stiglitz 1994, 111-112)<sup>7</sup> Odagiri summarizes the contrasts between theories in the following way:

"While the neoclassical school has mostly confined its analyses to competition in terms of quantity, in the short term, by exit, and with incentives given according to absolute levels of merit, competition in the real world has increasingly operated in terms of non-quantity variables (such as Schumpeterian competition in innovation), in the long term (that is, through an evolutionary process of competition), by the use of voice option (reinforced by

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<sup>5</sup> Also plants that produce durable goods. (Davis and Haltiwanger 1992, 855)

<sup>6</sup> We have shown that in Peru, the employment behavior of firms is very heterogeneous along the cycle, and that such heterogeneity is commonly found within industries and within firms of the same institutional characteristics (state, private and cooperatives). (Iguñiz and Montes 1994; Iguñiz and Vilcapoma 1993.)

<sup>7</sup> "Competition also provides the basis of **selection**, of deciding who has a comparative advantage in performing a particular task." (Stiglitz 1994, 161)

the threat of exit), and with incentives given according to relative merits (namely, rank-order tournaments). All these are forms of competition because they involve one person or firm striving against existing or potential rivals." ... "The increasing prevalence of these forms of competition coincides with an increasing specificity of assets, both physical and human." (Odagiri 1992, 18)

That selection process is part of a substitution strategy,

"In everyday language competition is synonymous with contest and rivalry. The many different meanings which have been attributed to this term in economics have a common feature which can be identified with this everyday concept of competition. What are the constituent elements of the economic concept of competition?

"Firstly, there must be a contrast of interests between economic agents. ... Secondly competitors must be able to substitute each other." (Zamagni 1987, 293)<sup>8</sup>

This is why the competitiveness of a firm is associated to the share of a market possessed by such firm. The competitive struggle has to be viewed from two perspectives: that within a market, and the competition between producers in different markets. In the first case a key economic result is the collective formation of a natural, long term or production price; in the second, the trend toward a never achievable uniform or natural rate of profits. (Shaikh 1990)

However, competitive struggles do not concentrate in just replacing the competitor from a market, either from the inside or due to the entry of other into that market. Competition, at its best, involves the destruction and creation of existing markets, not only of competitors in some market. As is well-known, to Schumpeter: "... this process of creative destruction is the essential fact about capitalism." (Schumpeter 1947. In: Hunter 1969, 42)

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<sup>8</sup> That same idea is presented in the following fashion: "...cada capital individual lucha para capturar la más grande porción posible del mercado, suplantar a sus competidores y excluirlos del mercado..." (Shaikh 1990, 83)

In general, the behavioral aspect of competition relates that process to those practices typical in war. "The oligopoly-theorist's classical literature can neither be Newton and Darwin, nor it can be Freud; he will have to turn to Clausewitz's Principles of War." (Rotschild 1947, 29)

A key term in most of the newest theory is **strategy**; it makes explicit that individual's decisions matter when trying to understand outcomes. It is, as Krugman reminds us, a business minded view of the economic process as opposite to a true economist's view. True economic thinking includes more than describing fights. The neoclassical option was to forget that competition meant direct conflict. To arrive to an idyllic general scene of universal harmonies they simplified the **homo economicus** behavior to the extreme, and abandoned competition.

B. The non-intended effects of human action

Most of the new theory on competition develops this general perspective. It deals with the structure, performance and conduct of a direct and explicit confrontation. Now everybody in the economic profession recognizes that competition is an activity for those directly involved, and not just a state or structure; but it is becoming also important that it is also a process resulting in outcomes that escape many times to both competitors' will. The literature on externalities is just an example of such awareness. We can talk of a behavior of individual entities, and of a process that generates outcomes out of control. The classics, and the most sophisticated theory in the twentieth century concentrated in one of these non intended effects of competition.

"During the two centuries since the publication of The Wealth of the Nations, the main activity of economists, it seems to me, has been to fill the gaps in Adam Smith's system, to correct his errors, and to make his analysis vastly more exact. A principal theme of The Wealth of Nations was that government regulation or centralized planning were not necessary to make an economic system function in an orderly way. The economy could be coordinated by a system of prices (the 'invisible hand') and, furthermore, with beneficial results. A major task of economists since the publication of The Wealth of Nations, as Harold Demsetz ... has explained, has been to formalize this proposition of Adam Smith." (Coase 1992)

There is wide agreement on what the classics wanted to show. As Harris (1988, 140) synthesizes:

"The classical conception of competition is that it is a process, not a state. Moreover, it is a turbulent process. It has as its conspicuously observable outward character that it is associated with booms and busts,

economic crises, financial panics, bankruptcies and the like. This turbulence is predominantly an aspect of the process of circulation, where it takes the form of price wars and trade wars, and not so much of the production process, except in Marx analysis, where it takes the form of a constant pressure of the individual capitals to innovate under penalty of ruin."

However, classical economic theory went further than the description of the competitive process. Concretely,

"... the central problematic of the classical conception...[was] to demonstrate how, if at all, such a process of competition, correctly conceived as a turbulent process or as 'creative destruction', may be considered to converge or gravitate towards a state of uniform profit rates as a condition for continuity and reproduction of the economic system as a whole and, in the longer term, to generate a continuing decline of the overall profit rate." (Harris 1988, 142)<sup>9</sup>

The question they studied is not, therefore, competition as such, but how that kind of fight was compatible with the expanded reproduction of the economy as a whole.

But this preoccupation with processes that escape the will of the participants allows us to distinguish between the description of individual behavior and the social outcomes of myriads of individual contests taking place every minute. Competition can, then, be analyzed in impersonal terms, as a process of social reproduction that is quite independent of the conscious objectives and strategies of individuals and firms or nations, and of their particular achievements. This two aspects, subjective and objective are both important. Actually, the problem of analyzing competition through these two approaches is not easy to solve, and it is not a question of introducing microeconomic reasoning into aggregate processes to understand them. The micro-foundations of macro-economics will not go to the point classics and general equilibrium theorist wanted to arrive.

### C. Cycles and technology

Another convergence in approaches refers to the way cycles are being studied. It is wellknown that heterodox economists as Marx and Schumpeter questioned the world of

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<sup>9</sup> For a summary, see also Zamagni (1987, 294)

equilibrium, and stressed permanent disequilibrium as a crucial feature of the capitalist economies. One of the best-known instabilities is the cyclical one. In general, growth is associated with a more important presence of progress than of regress, and the other way around in recessions.

The conventional analysis of fluctuations has been typically undertaken with the help of a separation between short and long run that was mainly based on the absence or presence of technical change. This division was explicitly used by Keynes, within the neoclassical tradition of the "given technology" analysis. To understand short-run evolution of poverty and inequality there was, according to him, no need to introduce technical change into the analysis.<sup>10</sup> It has been, perhaps, furthest such a neoclassical assumption has gone to explain such an structurally important topic. It reminds us the analysis by Marx of cyclical process assuming no technical change and "absolute surplus value". Although useful in many respects, served to hide behind aggregations the competitive aspect of the economic process. In any case, that separation between short and long run is recently being questioned with better analytical tools. As Aghion and Howitt say:

"The tendency for temporary shocks to become embedded into the economy's long-run growth path calls into question the traditional division of macroeconomic theory between trend and cycles, and calls for a return to the Schumpeterian view of growth and cycles as one unified phenomenon. The other side of this unified view is the short-run effect that can be exerted on the economy by random economy-wide changes in technology." (Aghion and Howitt 1995, 113)

This unification of cycles and trends has a long tradition. In a classical perspective there are models that produce that connection between the short and the long run, between technological change and distribution of income. One of them relates variations in poverty to changes in technology, and is presented by Anwar Shaikh:

"Smith, Ricardo and Marx typically abstract from supply/demand and supply/capacity variations in order to focus on the long term patterns produced by the effects of factors such as technical change, population

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<sup>10</sup> "The outstanding faults of the economic society in which we live are its failure to provide for full employment and its arbitrary and inequitable distribution of wealth and income" (Keynes 1964, 372) Keynes message was that inequality was not needed to create employment.

growth, and fertility of land, on the relation between the wage share and the normal rate of profit." (Shaikh 1991, footnote 5)

The link between short-run evolution and long-run trend is also obtainable extending the keynesian and kaleckian framework to solve the "knife-edge" problem posed by the Harrod-Domar view of growth. (Shaikh 1989, 1991).

As we will see below, the new awareness in the cyclical nature of the economy is becoming crucial to understand the production of unemployment and inequality.

#### **IV. CREATIVE DESTRUCTION**

The process of creative destruction has several channels. Technological (and organizational) process innovations are crucial and well-known in the theory of development. The research process in itself, and the product innovation that it brings about is an interesting area where simultaneous progress and decay of competitors appears to be quite common. The effects of faster growth on unemployment has been also included in some of the most recent models. Obviously, recessions are extremely important when analyzing bankruptcies and unemployment. In this section we will present some synthesizing summaries showing this variety of mechanisms relating stagnation and crisis to growth, job destruction to job creation, obsolescence to novelty; in general, regress to progress.

##### **A. Cost reduction and the treadmill.**

The first type of connection between progress and regress that we are going to mention is indeed quite old. In an always interesting little book the simplest process of competition was summarized as follows:

"... the innovators reap the gains of technological advance during the early phases of adoption, but after the improved technology has become industry-wide, the gains to innovators and all other farmers are eroded away either through falling product prices or rising land prices or a combination of the two, and in the long run the specific income gains to farmers are wiped out and farmers are back where they started - in a no-profit position. In this sense, technological advance puts farmers on a treadmill." (Cochrane 1965, 66)

In a study by Caballero and Hammour the price mechanism also operates to increase the damage to the laggards. The explanation presented is that most modern firms influence more on prices and this adds to the destruction process resulting from recession and the entry (creation) of new firms.

"...if creation declines only mildly in response to a sharp contraction, the equilibrium price falls more sharply, which induces additional destruction. This the reason why destruction not only preserves, but **amplifies** the asymmetries in demand: it must 'make up' for the symmetry in creation". (Caballero and Hammour 1994, 1361-2)

In an important work on wages from a Marxist viewpoint the same idea is presented, this time related to the changes in the level of wages and their differences.

"Marx shows that workers who are unfortunate enough to be employed in the more backward firms will generally find that their wages and working conditions will deteriorate both absolutely and relatively to workers who are employed in the more advanced firms." (Boltwinick 1993, 120)

In any case, the new importance assigned to heterogeneity within an industry is essential to present one of the most important market mechanisms that helps explaining the progress-poverty relation.

"Thus, differential conditions of production will be continually reproduced within industries as new capital enter with the latest techniques and older capitals continue to depreciate their aging fixed capital stock." (Boltwinick 1993, 120)<sup>11</sup>

As Cochrane concludes,

"Cruel as it may seem to the displaced farm people, it is part of the growth process of the national economy." (Cochrane 1965, 71)

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<sup>11</sup> The old (worst producers) vs new (best producers) has to be analyzed better. Empirical works do not seem to show that firm's age is a problem. Increasing returns are considered positively related to experience.

B. Innovation/obsolescence: deterring creation

Knowledge is considered the main tool for competition. The new theory of economic growth is improving the mathematical models that introduce this fact into models.<sup>12</sup> Let us present some of the most interesting polarising effects of research. First, in one recent paper, Aghion and Howitt present one aspect of competition among firms: competition through research expenditure. Research in this model has one main effect: improves the quality of products. As the authors say:

"This channel introduces into endogenous growth theory the factor of obsolescence. Obsolescence exemplifies an important general characteristic of the growth process, namely that progress creates losses as well as gains." (Aghion and Howitt 1992, 323)

The process by which the progress of one is not necessarily the progress of the other competitor is based on the dissuasive effect of the leading researchers on those that are less powerful. If some of the firms announce more expenditure on research, that in itself will reduce the expenditure of the rest of the competitors

"The more research people expect will occur following the next innovation the shorter the likely duration of the monopoly profits that will be enjoyed by the creator of that next innovation, and hence the smaller the payoff. This introduces a negative dependency of current research upon the amount of expected future research." (Aghion and Howitt 1995, 109)

In this model, two factors produce this negative dependency but the most interesting one is that if a competitor knows that more expenditure in research is going to be done by others in response to her innovation, she knows that obsolescence will arrive sooner, and the monopoly profits that will be received by her will last less. As a consequence, the decision to invest in research could be postponed.

Second, the relationship between average growth and research is not unambiguous.

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<sup>12</sup> "The main contribution of the literature on endogenous growth pioneered by Romer (1986) and Lucas (1988) has been to endogenize the underlying source of sustained growth in per-capita income, namely the accumulation of knowledge." (Aghion and Howitt 1992, 323)

"...the average growth rate of the economy is not necessarily increased by an increase in the productivity of research. In particular, a parameter change that makes research more productive in some states of the world can discourage research in other states, by increasing the threat of obsolescence faced by the product of research in those other states, to such an extent that the average growth rate is reduced." (Aghion and Howitt 1992, 325).

C. Reallocation of resources and jobs.

The mere fact of reallocating resources is being considered important to explain the costs of the normal market process. In a recent paper Aghion and Howitt remained us one of the possible consequences of reallocation of resources.

"... as Corriveau ... has shown, endogenous growth-models based on uncertain competitive innovation can rationalize a phenomenon that constitutes an awkward fact for existing real business cycle theories: negative shocks to aggregate GNP. In the Corriveau model these occur when the random arrival of new technological information leads society to reallocate resources to take advantage of the new possibilities implicit in this information but no immediate fruits in the form of enhanced output arise to offset the costs of reallocation." (Aghion and Howitt 1995, 113)

Answering the question about the effect of growth on long-run employment, these same authors in another paper summarize their model.

"The source of unemployment in the model is **labour re-allocation across firms**. More specifically, any production unit has to incur a fixed overhead cost in human capital whose price in terms of final consumption rises at the economy-wide rate of growth. Thus a production unit whose technology is fixed eventually becomes unable to produce enough to cover its fixed costs, at which point it is shut down by the firm that created it , forcing the worker into unemployment until matched with a new machine." (Aghion and Howitt 1994, 479)

The consequence is that unemployment is not only a result of recession but, under some circumstances also of growth.

"In the long run, faster economic growth must come from a faster increase in knowledge. To the extent that the advancement of knowledge is embodied in industrial innovations it is likely to raise job-destruction rate, through automation, skill-obsolescence, and bankruptcy associated with the

process of creative destruction. In short, increased growth is likely to produce an increased rate of job-turnover, and the search theories of Lucas and Prescott (1974) and Pissarides (1990) imply that an increased rate of job-turnover will result in a higher natural rate of unemployment. This conclusion is also consistent with the empirical results of Davis and Haltiwanger (1990) which show that periods of high unemployment tend to be periods of high job-turnover at the establishment level. It suggests the possibility of a positive long-run tradeoff between growth and unemployment, at least over some range.' (Aghion and Howitt 1994, 477)

In general, as experience shows, "...productivity increases are embodied in new jobs at the expense of old jobs." (Aghion and Howitt 1994, 478) Thus, growth has its own effect on unemployment. But obviously, recession do most of the damage.

D. The cleansing effect of recessions.

After analyzing several empirical studies, two leading economists summarize:

"The view that emerges from interpreting the greater cyclicity of job destruction along creative-destruction lines is one of recessions as times of 'cleansing', when outdated or relatively unprofitable techniques and products are pruned out of the productive system." (Caballero and Hammour 1994, 1352).

Along the cycle, "the rate of job destruction is more responsive to changes in sectoral activity than is the rate of job creation..." (Caballero and Hamour 1994, 1359)

The question is: how, and when the cyclical fluctuations impact on the competitive relative advantage of every competitor? It is well-known that recessions are critical periods for many firms. In a recent article Caballero and Hammoud produced a new model isolating and organizing some of the main factors explaining the ruin of the least productive competitors when demand declines in the economy. Their main interest there is to analyze the effects of the macroeconomics evolution on the interaction of competitors in a determined market.

The nature of the process is interesting and should be clarified eliminating other, also important, factors. In this model, we are not, indeed, facing a technological innovation

process at the firm level as in the treadmill case. New firms entering at the most advanced end of the industry's structure embody the already existing best technology. They do not create new technologies or increase supply while being part of the industry and competing. This is not, therefore, a paper on technology creation and supply increases by firms as a result of competition. That is why the authors establish that "Our emphasis here is on variations in demand as a source of economic fluctuations, and on the way a continuously renovating productive structure responds to them." (Caballero and Hamour 1994, 1350) It is structural change what matters, and its source is double: entry of firms with ever more advanced technology, and their impact on the already existing less advanced ones.

It is not, therefore, that some of the existing firms will accommodate those variations in demand innovating faster and destroying the less innovative ones in that industry. This would be, exactly, destructive creation, intra-industry competition at its best. We are in a case of destructive entry determined by "the rate at which production units that embody new techniques are created". The creative activity in the paper refers to the creation of new firms, and not to the creation of new technologies. That is why we think is better the term 'entry' to the term creation used in the paper.

The cleansing effect or rate of destruction of outdated firms depends on two main factors: the level of demand for those industries products and the rate of entrance of new firms through the most competitive extreme of the industry. This entrance affects those firms that are obsolete at the time of this most recent entrance, but also to those that have become obsolete due to the shortening of the age of the oldest unit allowed by competition to remain in operation. Thus, obsolescence depends in two ways on the destruction process, first on the competitive situation of the firm vis-a-vis the already existing more efficient firms, and second on the new members in the industry. "... the age at which units become obsolete is determined by the destruction process." (Caballero and Hamour 1994, 1352) It is not, strictly speaking, a new technological fact what matters but the relative place of competitors.

#### **IV. PRODUCTIVITY DIFFERENTIALS AND INTERNATIONAL COMPETITION**

In this chapter we want to illustrate how competition at the firm level can have unintended effects (positive or negative) on a global level. The debate on the impact of competition on underdevelopment and poverty is important, since it influences the decision makers of all countries. The new version of the old debate on the effect of international relations among different countries is more sophisticated but not always better substance has been incorporated. As Matsuyama summarizes:

"Many argue that, incorporated into a larger market area, small economies can enjoy all the benefits of economies of scale, and become main beneficiaries of economic integration. Others believe, however, that economic integration and the free movement of labor and capital lead to a concentration of economic activities into the center, leaving the periphery underdeveloped." (Matsuyama 1995, 713).

Let us present some examples of these divergent views o international interaction.

A. Development of underdevelopment once more.

A well-known article by Krugman has been presented many times as an example of how we can modelize an underdevelopment process through de-industrialization. The key point is that differences at the starting point become irreversible and accumulative. The concrete mechanism is simple and, quite classic:

"As manufacturing capital grows, the relative price of industrial goods falls, until eventually a point is reached when the lagging region's industry cannot compete and begins to shrink. Once this starts, there is no check, because costs rise as the scale of industry falls; and the lagging region's manufacturing sector disappears." (Krugman 1990, 99)

The "crucial assumption" is "that there are external economies in the industrial sector" and that therefore "a small 'head start' for one region will cumulate over time..."; and the consequence is that "... trade with developed countries prevents industrialization in less developed countries." (Krugman 1990, 93)

From a quite different perspective, Anwar Shaikh (1980, 1990) arrives to similar conclusion. The question is: if two countries produce both two commodities and one is more

productive in both of them than the other, will these countries specialize each in one of the two commodities? The typical answer in the textbooks is: yes. The reason is that both countries will benefit if instead of producing both, they specialize in that product where their productivity is relatively better compared to the other product. But, Shaikh argues, the mere fact that some outcome is better for everybody does not ensure that it will happen. However, the separation in trade theory between the real sector and the monetary sector does not allow any explanation about why what is best should happen. The key element that transforms an absolute or competitive advantage into just a comparative advantage is the theory of money. (Shaikh 1980, 215-6;1990, 194) The basic idea is that any theory that asserts that a trade deficit in one country will result into a price reduction relative to that of the superavit country will do the job of converting both countries more competitive in the product in which each one is relatively less disadvantaged.

"Any monetary theory that which translates the initial trade deficit of the backward country into falling price levels (falling relative to the price level in the advanced country) will do the trick. (Shaikh 1980, 216)<sup>13</sup>

Different theories of money are then presented to relate deficits to prices.

"The classical quantity theory argued that an outflow of gold from a country would lead to a fall in the money supply and hence in the price level. ... [In the case of the cash balance approach] a decrease in the money supply implies a decrease in the cash balances of individuals and firms; in order to 'not let their cash balances shrink too far,' people in the deficit country curtail their consumption and investment spending, and this drop in aggregate demand in turn leads to lower prices and wages...

An alternate path to this same result is made possible by tying the price level to the level of money wages. In this version, since the competition of cheap cloth and wine from abroad means a reduction in domestic wine and cloth production in the backward country,

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<sup>13</sup> For instance, Kindleberger describing a debate in the United Kingdom in the 1920s presents one of the arguments in this way. "The argument evoked a proposal, which had been seriously put forward in 1923, deliberately to ship \$100 million in gold to the United States to cause inflation there and relieve the pressure on the British balance of payments. The idea was rejected by Montagu Norman in November 1923 as impractical. The Federal Reserve system could too readily sterilize the gold, that is, take it into the monetary base but sell off an equal amount of government securities to leave the total base, and the prospect of inflation, unchanged." (Kindleberger 1993, 327)

the resulting trade deficit will be associated with a rise in unemployment. Money wages in the backward country will consequently fall, and with them, money prices..." (Shaikh 1980, 216)

The same relation is established with devaluation initiatives. But if there is no such a price-effect, as for instance in Keynes view, and also in Marx's analysis, the process is completely different. As this last author states,

"But in fact, a decrease in the quantity of gold rises only the interest rate, whereas a increase in the quantity of gold lowers the interest rate; and if not for the fact that the fluctuations in the interest rate enter into the determination of cost-prices, or in the determination of demand and supply, commodity-prices would be wholly unaffected" (Marx 1967, III, 551; in Shaikh 1980, 224)

The consequence of this difference in monetary theory changes the whole outcome of free trade competitive struggle when a country starts interacting with disadvantages in both commodities. Instead of protecting the less productive country through the relative cheapening of its commodities due to price changes, the rising interest rates in the deficit country increases the cost of capital, and aggravates the its competitive situation in both products. The country that started with a competitive (absolute) disadvantage in both commodities will continue non-competitive in each one of them. Underdevelopment will become a process, and not just a situation, an easily reversible starting point.

For a while, higher interest rates attract speculative capital, and direct foreign investment may be also attracted by lower wages. However, sooner or later, interest payments and profit remittances will change the course of capitals.

"... in free trade, the absolute disadvantage of the underdeveloped capitalist country will result in chronic trade deficits and mounting international borrowing. It will be chronically in deficit and chronically in debt." (Shaikh 1980, 226)

This debate about the pertinence of monetary theories goes on in recent analysis about integration initiatives as NAFTA.

B. Universal armonies once more.

According to Paul Krugman, what is essential to countries it is not so when we deal with international competition. On the one hand, in any country,

"Productivity isn't everything, but in the long run it is almost everything. A country's ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker."(Krugman 1992, 9).

However, when we deal with the market relation between different countries the importance of productivity to determine the living standards of the population is nil.

"So, while low productivity is a problem, low productivity relative to other countries is not only not a disaster; it is irrelevant"(Krugman 1994, 274)

This view is decisive when we try to understand the process of underdevelopment since what the quoted author is saying is that competition between economically powerful and weak firms of different countries does not lead to any difficulty in the weakest competitor.

There are two kind of arguments in this debate. One is related to the relative importance of trade for a country like the U.S.A.; the other, most important to us, refers to the price mechanisms that counteract the eventual impact of trade deficits in the country with less competitive firms.

The reason for this lack of importance of productivity in the international competition of firms is that national economies react to the deficits and superavits in trade and isolate themselves from the impact that such competition could have on them. That is why

"... productivity and competitiveness have very little to do with each other- and, indeed, ...the whole concept of 'competitiveness' is at best problematic, at worst misleading." (Krugman 1994, 268-9) <sup>14</sup>

But, indeed, the topic in debate is on the consequences of international trade on relatively low productivity activities located in countries with a different money than that in the countries where relatively high productivity activities are located.

The starting point in Krugman's argument is a situation where East and West produce both autos and buses. East is more productive in both than West. The question: "What will happen if these two countries trade with each other?" (Krugman 1994, 271). This is, by the way the same question Shaikh used to question the relevance of the comparative advantage approach to international trade. Krugman's answer is that relative productivities of countries is irrelevant

There are two basic views in this respect. One supported by Krugman's recent work and, by most of the establishment in economics stressing that the most probable outcome of competition is insignificant, and the other considering that there may be significant negative effects of trade on the weakest competitors. Let us illustrate an important part of this author's argument when there is a relative increase of productivity in other countries.

"Now suppose that productivity growth in the rest of the world accelerates to 3 percent. How does this change the picture?"

Obviously something has to give. If U.S. wages were to continue to grow at the same rate as foreign, and if the exchange rate were to remain unchanged, then U.S. goods and services would rapidly be priced out of world markets." (Krugman 1994, 275)

But this time, contrary to his model on uneven development, that option is not allowed to happen. As we summarized above, all theories that relate national trade deficits

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<sup>14</sup> We will not deal at this time with the concept of 'competitiveness'; only a reference will be used to determine one of its most important and classic meanings. "In the final analysis, competitiveness is determined by relative prices, for given products, between countries pairs." (Klein 1988, 309)

to national prices through wages, exchange rates, real balances or directly thanks to the more simple monetarist view will do the job of transforming the absolute advantage in both commodities by one country into an advantage by each country in one of the two products. And that is what Krugman does continuing the previously quoted paragraph.

"Either U.S. wages must grow more slowly, foreign wages grow more rapidly, or the dollar start declining. It makes no difference to our point which happens; so let's suppose that the dollar begins to slide on average by 2 percent per year to offset the 2-percent-per-year lag in U.S. productivity." (Krugman 1994, 275)<sup>15</sup>

This is the mechanism that impedes the pricing out of the market of the deficit countries less competitive industries, and ends up benefiting the country that is less productive on both goods. In this way, what is best, will be become real. But we know that there is no easy way from the convenience of some pattern of international trade to its becoming true practice.<sup>16</sup>

We are back again in the middle of a debate about universal armonies or underdevelopment processes. Obviously, empirical work is needed to choose among theories and models. All we can say is that the universal armonies world needs to be supported with research and not just with internally coherent models.

## VI. CONCLUDING

The new theory is producing an ample set of new tools capable of helping to explain growing divergences between countries' long term evolution. Empirical work is also presenting growing inequalities. There is not, in fact, much novelty at the conceptual level but new tools allow us to manipulate them coherently. Many of the concepts mentioned above were already present in heterodox development theorists but models of cumulative

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<sup>15</sup> The same argument is presented in Kindleberger (1993, 332). "...the price level was still out of line. If prices and wages would not go up in the United States, they would have to go down in Britain... Prices and wages did not rise in the United States, and it became necessary to force them down in Britain."

<sup>16</sup> Suboptimal outcomes of free competition are not, after all uncommon. See, for instance in Matsuyama (1995, 723).

causation not only legitimize professionally, but also help us in a more rigorous analysis of current general trends.

"... the standard neoclassical paradigm, exemplified by Kenneth Arrow and Frank Hahn (1971), emphasizes the self-adjusting mechanisms of market forces with its efficient resource allocation. As different activities compete for scarce resources, expansion of one activity comes only at the expense of others, which tends to dampen any perturbation to the system. Imperfect competition and incomplete markets (through an endogenous change in the range of products offered in the market), as departures from the standard paradigm, leave more room for complementarities, and make the system more conducive to circular and cumulative causation, as complementarities help the system break away from the stabilizing forces of resource constraints." (Matsuyama 1995, 702)

Even more, "... complementarities arise as an outcome of the internal mechanisms of the market system...: (Matsuyama 1995, 703)

These complementarities were part of the heterodox development thinking, and are obviously important to analyze in a more sophisticated way "perturbations" as growing long-term inequality at the world level. At the same time, it suggests that a view of the economy based on "given" resources and technology does not allow us to understand the evident absence of internal economic mechanisms capable of controlling environmental damage. At the same time, neoclassical theory will remain relevant as far as "one activity comes only at the expense of others".

But we are learning that new activities do not compete for the same resources the old ones were using; scarcity is not the best starting point. New products call for new resources and these are, many times, created from "nothing" as a chip or from knowledge.

If during the XX century mainstream economic theory dealt with task of showing how the system was kept together,<sup>17</sup> and in harmony, in the XXI century, the task will probably be the understanding, and to a few, the justification of the social and geographical concentration of the benefits of technological and organizative transformation. At least, three fourths of the population of the planet will be asking that question. The World Bank has shown recently is aware of the problem: "There is a substantial risk that inequality between rich and poor will grow ver the coming decades, while poverty deepens." (World Bank 1995, 80). "There can be no guarantee that the poorest workers will see their living standards rise." (World Bank 1995, 9)

What are the theoreticians saying about inequality? Cumulative causation and inequality reproduction is related to "history" and "expectations".

"On one side is the belief that choice among multiple equilibria is essentially resolved by **history**: that past events set the preconditions that direct the economy to one or another steady state. In the traditional literature

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<sup>17</sup> And, we should add, how we could impede recessions.

this view is the preponderant one; indeed, as I shall emphasize later there is a strong tradition arguing that history matters precisely because of increasing returns. On the other side, however, is the view that the key determinant of choice of equilibrium is **expectations**: that there is a decisive element of self-fulfilling prophecy." (Krugman 1991a, 652)

Indeed, his own work points to the side of history. In his Geography and Trade proposal, he says:

"In particular, I want to show two things: that increasing returns are in fact a pervasive influence on the economy, and that these increasing returns give a decisive role to history in determining the geography of real economies." (Krugman, 1991b, 10)

He himself summarizes another previous work in the following manner:

"I have used external economies to formulate an 'uneven development' model in which the division of the world into rich and poor nations takes place endogenously, and a model in which a variety of heterodox views are justified by a framework in which patterns of specialization generated by historical accident get 'locked in' through learning effects." (Krugman 1991a, 651)

The pessimism about equality present in the last World Bank Report (World Bank 1995) is the result of facts, and also of theories. The best being said is that rescuing economies through self-fulfilling expectations cannot be ruled out. Indeed, facts suggest that expectations are more relevant to deal with case studies than with general trends.

"The possibility of self-fulfilling expectations cannot be ruled out. In particular, the economy may be able to escape from a 'bad' state only if expectations of agents are somehow coordinated. 'History' alone may not be enough to dictate the long-run behavior of the economy with externalities." (Matsuyama 1991, 619)

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