Over-accumulation, Rising Costs and 'Unproductive' Labor: The Relevance of the Classic Stationary State Issue for Developed Countries

Cédric Durand and Philippe Légé

Review of Radical Political Economics 2014 46: 35 originally published online 12 June 2013
DOI: 10.1177/0486613413488066

Review of Radical Political Economics
2014, Vol. 46(1) 35–53

DOI: 10.1177/0486613413488066
rrpe.sagepub.com

Over-accumulation, Rising Costs and 'Unproductive' Labor: The Relevance of the Classic Stationary State Issue for Developed Countries

Cédric Durand[1] and Philippe Légé[2]

Abstract

The current crisis takes place within a long downturn and new debates on the future of growth are emerging. This paper argues that some theoretical insights made by classical economists about the end of economic expansion are relevant for the discussion on the prospects for growth in rich countries. We focus on three key mechanisms related to contemporary radical economic analysis: over-accumulation, rising costs of accumulation, and the balance between productive and unproductive labor and consumption.

JEL classification: B12, O40, P17

Keywords

stationary state, long downturn, Smith, Marx, over accumulation

Introduction

The classic stationary state issue is echoed in some contemporary preoccupations. The arrangement designed to resolve the 1970s' crisis did not prevent a decline of system dynamics. Since the "Golden Age" (Marglin and Schor 1990), developed economies have lost momentum; both production growth rates (Figure 1: GDP growth) and investment rates (Figure 2: Investment in % of GDP) have declined, facts that are consistent with a slowdown in capital accumulation (Figure 3: Growth of gross capital formation). Hence, the current crisis takes place within a long downturn.

This paper argues that some theoretical insights made by classical economists about the end of economic expansion are relevant for the discussion on the prospects for growth in rich countries. We focus on three key mechanisms: over-accumulation, rising costs of accumulation, and the balance between productive and unproductive labor and consumption. Consequently, some crucial issues, such as the widely discussed role of demographic trends, are virtually ignored.

[1]Université Paris-13, Sorbonne Paris-Cité, CEPN and CEMI
[2]CRIISEA-UPJV, France

Date received: July 30, 2011
Date accepted: July 19, 2012

Corresponding Author:
Cédric Durand, CEPN, 99 avenue Jean-Baptiste Clement, Villetaneuse, F93430, France.
Email: cdurand@ehess.fr

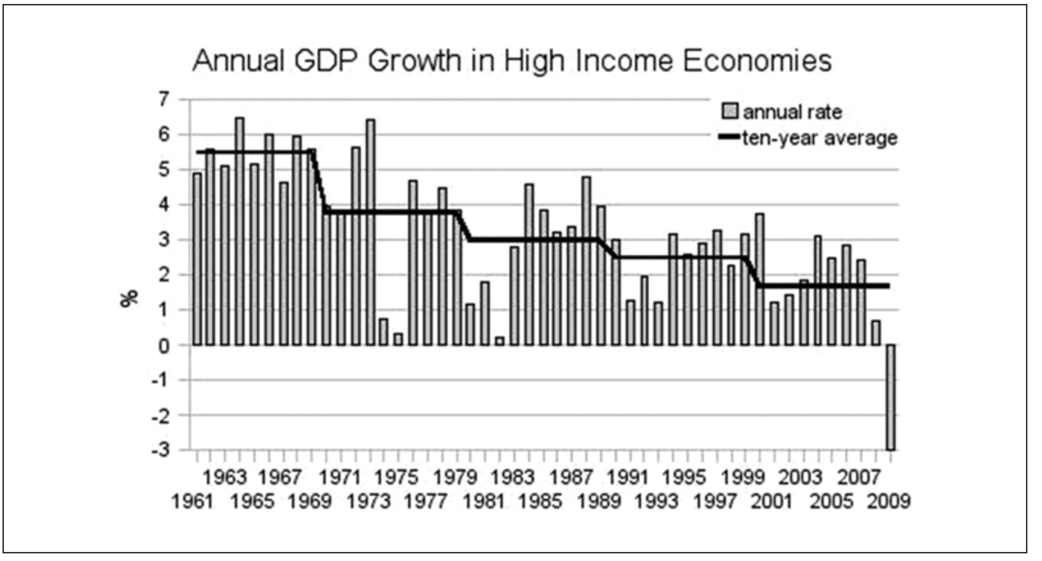

Figure 1. GDP growth, High income countries (WDI-World Bank).

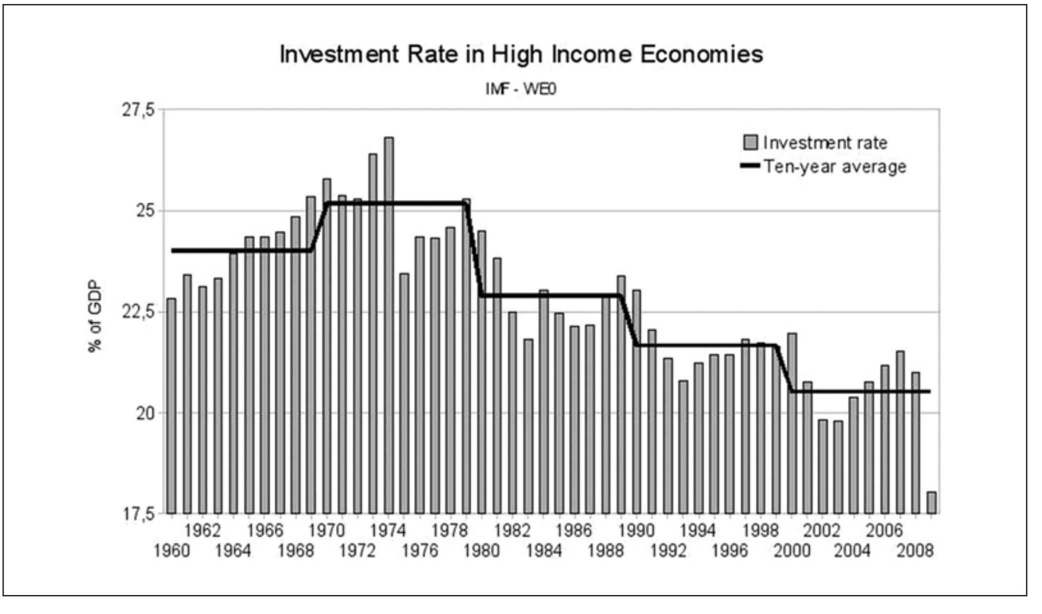

Figure 2. A decline of investment rate, High income countries (IMF).

Section 1 examines how the capital accumulation slowdown can be interpreted as a sign of over-accumulation through the destructive impact of competition. We then turn to the rising costs of accumulation and the exhaustion of what Karl Marx calls "the original sources of all wealth" (section 2). Contemporary concern over the environment and the degradation of social conditions are reminiscent of the classical preoccupation with the limits on growth due to the consequences of decreasing agricultural returns. Finally, we explore the current significance of the distinction made by classical economists between productive and unproductive labor (section 3). The conclusion summarizes our arguments and stresses the implications of the hypothesis of the exhaustion of growth, in particular as far as radical political economy is concerned.

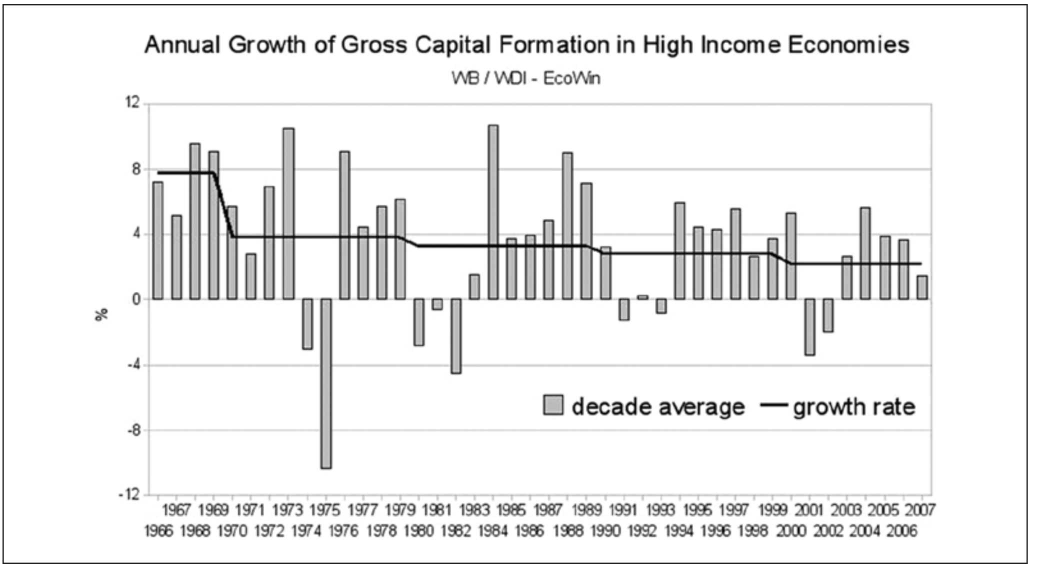

Figure 3. A slowdown of accumulation, High income countries (WDI-World Bank).

1. Smithian Over-Accumulation and the Transformation of Competition in the Neoliberal Era

Free market advocates use the invisible hand metaphor optimistically, but Adam Smith was "both the Prophet and Cassandra of commercialism" (Alvey 2003: 294). Section 1.1 recalls Smith's prospect of running down into a stationary state and Marx's ambivalent reception of this idea. Section 1.2 explains why, in a Marxist perspective, Hilferding argued that, in certain specific historical conditions, competition can hinder accumulation. Section 1.3 examines how some radical contemporary thinkers deal with this issue in the neoliberal context.

1.1. Smith on the stationary state and Marx's reading of Smith

According to Smith, real wealth is the annual product of land and labor. Capital accumulation increases the number of those who are employed in useful labor and enhances their "productive power" by extending the division of labor. Thus, Smith describes a process that enhances the material conditions for the greatest number. Nevertheless, he is worried about the fragility of growth and some scholars point to the "profound pessimism" concealed within his *Wealth of Nations* (Heilbroner 1973: 243; Meek 1977: 13).

Smith introduces the idea that a stationary state might be the outcome of a progressive state. He maintains this idea throughout all six editions of the *Wealth of Nations*. On the one hand, growth produces a rise in real wages (1776: vol. 1, p. 96). On the other hand, growth runs out of steam because it exhausts the accumulation process. This is the "paradox of progress" laid out by Heilbroner.[1] But how does a stationary state stem from a progressive one? We would stress three

[1]On Heilbroner, see Alvey (2003: 20-1). Heilbroner's interpretation of Smith's pessimism has been criticized by Gavin Kennedy (2005). But according to *The Adam Smith Review*, "one of the more intriguing aspects of *Smith's Lost Legacy* is Kennedy's attempt to offer an optimistic reading of Smith's political economy […] Kennedy may be right in maintaining that too much has been made by some about Smith's version of the stationary state. Nevertheless it is an essential part of Smith's growth model and, at the very least, serves as a warning to policymakers unconcerned about whether commercial markets are expanding or contracting. As Smith emphasizes time and again, there are no guarantees that growth is inevitable" (Harpham 2007: 221).

elements of Smith's economic outline which all point to the idea that the exhaustion of growth can be endogenous to the accumulation process.

First, Smith suggests a long-term inverse relationship between profit and capital stock due to an increased competition: "When the stocks of many rich merchants are turned into the same trade, their mutual competition naturally tends to lower its profit; and when there is a like increase of stock in all the different trades carried on in the same society, the same competition must produce the same effect in them all" (1776: vol.1, p. 105). Second, Smith indicates that there is a limit to the accumulation of capital: for a given "soil and climate" and a given "situation with respect to other countries" the country can become "fully stocked" (*ibid*.: 108).

Third, he states that no sustainable relief can be expected from the demand-side. In a rarely quoted extract from Book V, Smith explains that in the long run an increase of demand thanks to foreign trade induces intensification of competition and innovations, which reduce prices and profits:

> The increase of demand, besides, though in the beginning it may sometimes raise the price of goods, never fails to lower it in the long run. It encourages production, and thereby increases the competition of the producers, who, in order to undersell one another, have recourse to new divisions of labour and new improvements of art, which might never otherwise have been thought of. (*ibid*.: vol. II, p. 748)

Here the destructive nature of competition is related to a consequence of capital over-accumulation caused by expansion of the market.

Marx highlighted and analyzed Smith's pessimism. As Ronald Meek (1977: 9) puts it, Marx's quoting of Smith in the *1844 Manuscripts* has "certain *relatively* critical and pessimistic implications." A few years later, in his *Outlines of the Critique of Political Economy*, Marx examines Smith's opinions on the stationary state:

> A. Smith explained the fall of the rate of profit, as capital grows, by the competition among capitals …. Smith's phrase is correct to the extent that only in competition – the action of capital upon capital – are the inherent laws of capital, its tendencies, realized. But it is false in the sense in which he understands it, as if competition imposed laws on capital from the outside …. Competition executes the inner laws of capital; makes them into compulsory laws towards the individual capital, but it does not invent them. It realizes them. (Marx 1857: 404)

Marx tries to encompass Smith's narrow view. Smith's idea "is false," but once an important turn has been done concerning the method, it "is correct." In the third volume of *Capital*, he describes the law of over-accumulation (or accelerated accumulation) as the inability to get a high profit rate (Marx 1894: 166). According to Marx "the same causes that bring about a tendency for the general rate of profit to fall necessitate an accelerated accumulation of capital," but as "everything appears reversed in competition" (1894: 155) some merchants attribute a fall in profit to the expansion of capital. In Marx's view, competitive pressure constrains individual capitalists to invest in order to adopt the more modern productive techniques that lead to an increasing capital intensity of production and then a tendency of the rate of profit to fall due to a rise in the organic composition of capital.

Smith and Marx thus propose two competing views of declining tendencies in capitalist economies related to over-accumulation. According to Smith, over-accumulation of capital leads to increasing competitive pressure and then low profits. Increasing demand cannot impede this phenomenon in the long run, and in fact, it makes it worse. According to Marx, the fundamental cause of the declining profit rate is not competition but the diminishing opportunities to extract surplus value due to the rise in the organic composition of capital. However, as we will show now, in a Marxian framework the evolution of competition forms can hinder accumulation if it impedes the regulating role of the profit rate.

1.2. The development of fixed capital can prevent the equalization of the profit rates

According to Marx, the struggle among individual capitals is a necessary moment in order to understand the dialectic unity of capital (1857: 210, 1894: 19). "Aside from unessential, incidental and mutually compensating distinctions, differences in the average rate of profit in the various branches of industry do not exist in reality, and could not exist without abolishing the entire system of capitalist production" (*ibid*.: 113). This is a strong statement which is consistent with an analytical framework in which the profit rate exerts a key regulating role (Dockès and Rosier 1983: 43).

As David Ricardo (1817: 49) noted, capital mobility does not ensure a perfect equalization of the profit rate because a capitalist may be "willing to forego a part of his money profit, in consideration of the security, cleanliness, ease, or any other real or fancied advantage which one employment may possess over another." Marx also describes the equalization of profit rates as a permanent process, an "incessant outflow and influx" (1894: 138), and Marxist economists insist on this "turbulent equalization" (Shaikh 2008). As Duménil, Glick, and Lévy (2001: 72) point out "[for Marx, as well as Smith and Ricardo], competition is efficient in allocating capital among industries, thereby bringing about a uniform profit rate." However, "this mechanism is decentralized, it occurs within disequilibrium, and adjustments are made *ex-post*."

Beyond these short-term adjustment problems, Marx takes a historical point of view and admits that the equalization process depends on the extent of capitalist development (1894: 138). As the capitalist mode of production is developing, competition annihilates the extra profit by spreading the new labor processes and the technical innovations throughout the whole branch (Marx 1894: 179). The equalization of the profit rate across all industries requires thus "a higher development of capitalist production" (*ibid.*: 130).

In his book on *Finance Capital* (1910), Rudolf Hilferding has taken an opposite stance on this point. His aim is to provide a general explanation of the more and more numerous cases when competition cannot exert the inner law that brings a uniform profit rate among capitals. Evidence from the German steel industry attests to the fact that technical progress produces a rise in the organic composition of capital, *but also* a modification to the elements composing constant capital. An enormous inflation of fixed capital means that once capital has been invested, its transfer from one sphere to another becomes increasingly difficult:

> The larger the fixed capital, the greater its weight in the balance of investments, and the larger its proportion in relation to the total capital, the more difficult it becomes to realize the value embodied in it without very considerable losses, and to transfer it to a more advantageous sphere. This circumstance modifies the competition between capitals for investment outlets. In place of the old legal restrictions imposed by medieval tutelage, new economic restrictions have emerged which limit the mobility of capital. (1910: 186)

These new obstacles to the tendency to equalize rates of profit increase as capitalism develops, particularly in the heavy industries (Hilferding 1910: 189).

Gérard Duménil (1978: 298-9) objects to Hilferding's point, suggesting that the development of fixed capital is not "a serious obstacle to the equalization." In the sector where fixed capital is large, over-accumulation makes profit rates fall below the average rate. Then some capitals are depreciated so that the profit rate rises in this sector. Thus, over-accumulation can be cleared out by depreciation.[2] And when depreciation is not sufficient, withdrawal or destruction of capital are necessary before new investment can occur (Marx 1894: 170-173).

[2]Depreciation is a case of devaluation, which is "the underside to over-accumulation" (Harvey 1982: 195).

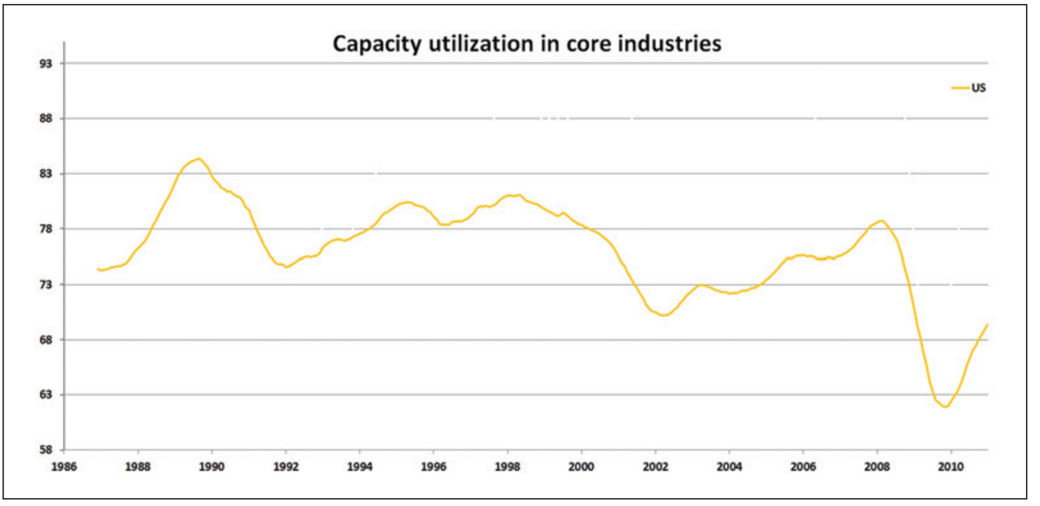

Figure 4. US capacity utilization rate in core industries (Federal Reserve Bank).

In fact, Hilferding (1910: 189-90) emphasizes this Marxian view and allows for depreciation, but explains that it takes a long time:

> The competitive struggle is not one between the strong and the weak, in which the latter are destroyed and the excess capital in that sphere is eliminated, but a struggle between equals, which can remain indecisive for a long time, imposing equal sacrifices on all the contending parties. The enterprises involved must all find ways of continuing the struggle, if the whole immense capital invested in each of them is not to depreciate in value. Consequently, it has become extremely difficult, in this sphere, to ease the situation by writing off capital …. A situation may easily develop, in these areas, in which the rate of profit remains below the average over a long period … and it can be equalized only very gradually.

In sum, Hilferding introduces an important idea concerning the relationships between competition and accumulation in the course of capitalist development. While, in Marx's view higher capitalist development favors the equalization of the profit rate, in Hilferding's analysis this development on the contrary prevents such an equalization because of growing sunk costs from fixed assets which impede the withdrawal of under-performing capitals. This phenomenon is adverse to accumulation because it lowers the average profit rate of the economy.

1.3. The destructive impact of competition in the neoliberal era

In these different theoretical frameworks, we have identified three main mechanisms through which competition can hinder accumulation and foster stagnationist tendencies: Smith's intensification of accumulation due to a growing capital stock; Marx's decline of the profit rate due to rising organic composition of capital; Hilferding's growing role of fixed capital which limits the reallocation or the elimination of under-performing capitals. How do contemporary radical economists relate these mechanisms to the stylized facts presented in the introduction and to the contemporary tendencies toward structural excess capacities in core industries? From an empirical point of view the increase of global excess capacities is difficult to assess due to the lack of data. As Crotty puts it (2002: 24), "there is not even a consensus on how [global excess capacity] should be defined and measured." However there are some partial and indirect indications consistent with such a trend (Harari-Kermadec and Légé 2011). The capacity utilization data provided by the U.S. Federal Reserve Bank (based on the Census Bureau's Survey of Plant Capacity) shows cycle by cycle an aggravation of structural excess capacities (Figure 4). Moreover the dramatic reduction of world inflation during the past two decades, and particularly since the Asian crisis of the late nineties, points to the establishment of a new price regime resulting from a global excess of supply (Aglietta *et al*. 2009: 19-27).

In order to assess how radical contemporary economists deal with the competition-accumulation complex, it is first necessary to distinguish between two main approaches. On the one hand scholars such as Robert Brenner and Alan Freeman consider that capitalism is undone by its own dynamism of accumulation. On the other hand, the authors from the regulation and the social structure of accumulation schools do not deny the intrinsic propensity of capitalism to crisis but insist on the role of institutional arrangements which affect the accumulation regimes and may be able to contain the declining tendencies. The Keynesian-Marxian approach of James Crotty lies somewhere inbetween. These distinctive points of departure lead to various appraisals of the neoliberal era. While Brenner and Freeman insist on the internal dynamics of accumulation, the SSA and the regulation schools point to historically contingent factors that may hinder accumulation. Crotty mobilizes some of the classical arguments but considers that their relevance is contingent upon the politico-social context.

Alan Freeman's view is based on his interpretation of value theory (Freeman and Carchedi 1995; Freeman, Kliman, and Wells 2003) and the idea that Marx's theory of the fall of the rate of profit is sufficient to account for crisis tendencies in contemporary capitalism while "particular historical circumstances such as the regulatory regime, a system of innovation, or special competitive behavior" cannot explain them nor avoid them (Freeman 1999: 31). However, this framework does not imply that a general crisis tendency will lead to a final breakdown of the system, but that recovery requires an external political intervention. Neoliberalism can thus be interpreted as a set of policies which were for a time successful in limiting the deepening of the crisis of the seventies. However, how these political interventions operate is mostly beyond the scope of Freeman's prospect.

Like Freeman, Brenner insists that crisis tendencies are intrinsic to the process of capital accumulation. However, his emphasis is on the dialectical relationships between accumulation and competition. Brenner (1998, 2006) develops the idea that the industrial catch-up in Germany, Japan, and other new industrial powers is at the root both of the long downturn that began at the end of the 1960s[3] and the present crisis:

> The fundamental source of today's crisis is the steadily declining vitality of the advanced capitalist economies over three decades, business-cycle by business-cycle, right into the present. The long term weakening of capital accumulation and of aggregate demand has been rooted in a profound system-wide decline and failure to recover of the rate of return on capital, resulting largely – though not only – from a persistent tendency to over-capacity, i.e. oversupply, in global manufacturing industries. (Brenner 2006: 2)

Brenner's argument is in line with Smithian reflections on the negative impact of the rise of capital stock on profits due to increasing competition. However, it is used in a critical Marxian way. Over-accumulation is presented as the result of a coordination failure – the anarchy of the market – where the individual rationality of each capitalist pushes them to invest in new facilities and technologies while the aggregate result is an excessive build-up of capital stock in production. The main problem arises from the failure to adjust of firms which sustain reduced profitability as a result of the introduction of lower cost and lower priced goods by cost-cutters in their line. Because their fixed capital is sunk "it is rational for them to remain in the line so long as the new, lowered price allows them at least to make the average rate of return on their

[3]Although, the discussion of Brenner's thesis goes beyond the limits of this article, it is worth noting that several aspects of his arguments have attracted heavy criticism (Duménil, Glick, and Lévy 2001; Fine, Lapavistas, and Milonakis 2001; Zacharias 2002) and his claims about the falling rate of profit have been disputed on empirical grounds as well (Foster and Magdoff 2008; Duménil and Lévy 2010; Husson 2010).

circulating capital" (Brenner 2006: 29). It is crucial to understand that for Brenner the key problem is the rate of entry and exit of capital and not capacity utilization. Indeed, that means that greater demand can only give some relief on profits in the short run because, as in Adam Smith's statement, in the long run it would just attract more new competitors, driving prices and profits down (Walker 1999: 191).

Brenner's emphasis on the role of sunk cost of fixed capital is pretty much in line with Hilferding's argument as well as James Crotty's analysis. However Crotty's interpretation only concedes a limited validity of Brenner's conceptual framework. He considers that Brenner's arguments concerning the new competition regime do not explain the 1970s' crisis, which was attributable mainly to a profit squeeze caused by a disconnection between the rhythm of wage increases and productivity growth (Crotty 1999). With an explanation of the 1970s' crisis similar to some regulationist (Mazier *et al.* 1984; Dockès and Rosier 1983) or SSA (Bowles and Gintis 1986) analysis, Crotty considers Brenner's emphasis on the destructive effect of over-accumulation relevant only in the context of the 1990s where demand was crushed by the requirements of "impatient finance." Oligopolies at the center of the system were able to maintain some co-respective relations "even as Japan, and, later, Korea and Taiwan began their slow ascent up the export pecking order," but not later when "neoliberalism severely constrained demand growth" (Crotty 2002: 37). In this view, over-capacity is the consequence of over-investment relative to demand.

Crotty's analysis combines thus the typical Keynesian reasoning on economic process, with a study of the transformation competition forms. He stresses that many economists explain "the decline in global demand growth since the early 1970s" and the "initial rise in excess capacity," but also that "the answer to the question of why global supply did not eventually adjust to the slower rate of growth in demand, leading to a slow-paced but balanced expansion, is not obvious" (2002: 24). His explanation is that initial excess capacity:

> combined with the collapse of barriers to the free movement of capital, triggered competitive wars for survival. [This] led firms to adopt policies that both further constrained global demand growth and expanded industry capacity at a pace faster than would be understandable within either a neoclassical or Keynesian framework, reproducing excess capacity. Global neoliberalism has thus unleashed a destructive dynamic interaction between its macro and micro levels of activity, a kind of vicious economic circle. (*ibid*.: 25)

Like Brenner, Crotty is thus in line with Smith and Hilferding when he suggests that the contemporary "coercive competition" continuously recreates excess capacity in core industries. However, he departs from Smith and Brenner in insisting on the importance of sluggish demand in fostering global excess capacities in the neoliberal era.

Crotty (2000: 24, 2002: 42) frequently quotes a famous excerpt from *The Poverty of Philosophy*, in which Marx draws on a synthesis of competition and monopoly related to the dynamic of class struggle (Marx 1847: 69). This reference is symptomatic of how Crotty and other radical thinkers depart crucially from Freeman's and Brenner's emphasis on the internal dynamic of accumulation. Crotty and, even more, the authors from the regulation and social structure of accumulation schools have focused much of their attention on the politico-institutional determinants of the different phases of capitalist development.

The regulationist school's basic assumption is "that capitalism is not a self-equilibrating process but requires intermediation from external structures, and that the configuration of institutional forms helps us understand how a capitalist growth regime takes place and finds its mediations in a distinct historical phase" (Petit 1999: 238). They do not consider that capitalism is a stable system but insist on the possibilities of "rescheduling the crisis" (Harvey 1989: 196). As a result, their relationship with Marxism – which was initially rooted in Gramscian insights – has become more and more slack, mainly retaining from this tradition the idea "that no mode of production disappears before its full potential has been realized – an argument that points to work on capitalism's capacity to resolve crises through institutional innovation" (Jessop and Sum 2006: 354).

Table 1. Correspondences between classical insights about the destructive effect of competition and some contemporary radical thinkers.

	Brenner	Freeman	Crotty	Regulation school and SSA
SMITH				
Abundance of capital increases competitive pressure and thus lowers profits	**+**	n.r	**+**	+
Expansion of demand reduces prices and profit in the long run	**+**	n.r	**-**	**-**
MARX				
Competition induces investment and a subsequent increase in the organic composition of capital which lowers profits	n.r.	**+**	n.r	n.r
HILFERDING				
Sunk costs prevent the reallocation or the elimination of under-performing capitals	**+**	n.r	**+**	n.r

Legend : **(+)** acceptation; (+) weak acceptation; **(-)** rejection; **(**n.r.**)** not relevant

The SSA school is a close cousin of the regulation school for it considers that "the Social Structure of Accumulation consists of all the institutions that impinge upon the accumulation process" (Gordon, Edwards, and Reich 1982: 23). But the SSA school has adopted a less "harmonicist" position than the regulation, focusing more explicitly on the fact that institutional structure enhances capitalist power. According to Kotz and Wolfson (2010), there have been difficulties in applying SSA theory to the neoliberal regime because of the assumption linking SSAs with rapid economic growth. They propose a "re-conceptualization of SSA theory" in which the enhanced capitalist power translates into a higher share of profit in total income but not into faster growth. To account for slow growth, Kotz and Wolfson refer to Crotty's idea that one key difference between neoliberal and constrained-market SSAs is "in the nature of competition among capitalists."

While analyzing the crisis of Fordism and the characteristics of the post-Fordist period, regulationists have also stressed the importance of the changes concerning the competition forms and their detrimental consequences on growth and social conditions (for example, Mazier *et al*. 1984; Petit 1999). However, as in SSA researches, the causal link between over-accumulation and competition is not really considered, in contrast with Smith's pessimism and Hilferding's focus on fixed capital which are echoed in Brenner's and Crotty's writings. Much of the regulationist and SSA analysis has focused on the role played by the liberalization of finance in fostering growth in the past two decades while gathering the seeds of the violent 2007-2008 financial crash. For example, both Boyer (2008) and Kotz (2011) insist on the role of finance-induced demand in fostering over-investment. As a result they are not very engaged in discussions concerning the causes and implications of contemporary destructive dialectical relations between competition and over-accumulation.

In sum, as shown in Table 1, fruitful correspondences could be drawn between insights made by classical economists and the analysis of some contemporary radical thinkers concerning the relationships between over-accumulation, competition, and crisis tendencies. This filiation has not been explicitly rejected but *de facto* almost lost in regulation theory and the SSA school; their focus on more historically contingent institutional determinants of growth regimes has diverted them from the study of the intrinsic movements of accumulation. In our view, the intermediary position of James Crotty reflects an interesting attempt to revive these classical insights through considering their contingency to the politico-institutional context.

2. A Pessimistic Ricardian Perspective on the Rising Costs of Accumulation

In classical writings, another distinctive limit to accumulation is derived from Malthus's insistence in his *Principle of Population* on the idea of external limits, which is reminiscent of Marx's preoccupation with the exhaustion of the "original sources of all wealth – the soil and the labourer" (Marx 1867: 326), echoed in some major present-day debates.

2.1. Ecological limits and economic pessimism in classical writings

Malthus's *Principle of Population* opens up a huge area of debate and economic pessimism typical of Smith. Initial arguments focused not on the end of capital accumulation, but on the consequences of the different dynamics of a geometric population increase versus arithmetic growth in food supplies. If population numbers increase before the means of subsistence are increased, "the poor consequently must live much worse" (Malthus 1798: 19). In Malthus's view, these deleterious effects on workers do not prevent accumulation, but, on the contrary, fuel a mechanism, which Marx and Engels later described as the "industrial reserve army": an abundance of poor people looking for jobs tends to reduce wages and opens the way to a new phase of economic dynamism through higher profits.

The link between depletion of resources and stagnation is referred to explicitly by Ricardo. Departing from Smith and Malthus, he considered the decreasing returns from agriculture a threat to accumulation. The Ricardian argument (Ricardo 1828: 208) is well known: an increase in population numbers brings into cultivation more land that is of increasingly poor quality; this leads to an increase in wheat prices, fueling higher rents and also higher wages, which eventually squeeze out profits. The ensuing reduction in investment capital means that accumulation slows to a stationary state in which the capitalist makes near zero profit. However, Ricardo claims also that this decline can be checked by technological improvements in machinery and international trade.

2.2. The degradation of ecological and social conditions in contemporary developed economies

The classical preoccupation with scarcity of resources is echoed in contemporary debates, in particular in relation to the ecological crisis and the deterioration of social conditions. Since the 1972 Meadows report, a significant body of the economic literature has addressed the issues of whether humanity can afford higher global levels of consumption and production associated with the rapid extension of the Western capitalist civilizational path. In recent times, de-growth theses have attracted growing interest as the appeal of the concept of sustainable development decreased in the absence of substantial progress concerning environmental and social durability (Martínez-Alier *et al.* 2010). Contemporary research on wealth indicators (Gadrey and Jany-Catrice 2005; Stiglitz, Fitoussi, and Sen 2010) have given a considerable amount of empirical elements to point out the divorce between GDP growth and socio-economic wellbeing, which points out the rising costs of accumulation. The empirical work built on the genuine progress indicator (GPI) is particularly eloquent.[4] Several decades of research point to a GDP per capita threshold whereby growth shifts from being economic to non-economic according to the criteria of the GPI indicator (Lawn and Clark 2010). This switch occurred in the United States, New Zealand, Australia, and a number of European countries during the 1970s and 1980s, in Japan in the nineties, and in the early 2000s in some developing countries such as China and Thailand.

[4]Comprised of around twenty individual benefit and cost items, the GPI integrates the wide-ranging impacts of GDP growth into a single monetary-based index (for a detailed presentation see Lawn and Clarke 2006).

In the recent period, three main lines of argument have been developed concerning the link between growth and rising costs of ecological and, less frequently, social conditions. A first group of researchers, such as Lester Brown and Paul Hawken, and also more recently more mainstream researchers and proponents of a "Green New Deal," suggest that further sustainable growth is possible thanks to technological development and factor substitutability. Although there is very wide orientation within this group, all suggest that further growth is compatible with ecological challenges with the implementation of appropriate policies related to regulation, taxation, and investment to foster a consumption/investment balance more favorable to investment (Arrow *et al.* 2004). A second group of investigations represented by Herman Daly's (1974; 1991) work, but also that of researchers such as Tim Jackson (2009) and Peter Victor (2008), maintains that "growth is not possible" (Simms *et al.* 2010), but that capitalism without growth is an option. This latter claim is challenged by a third group of authors who adopt an anti-capitalist perspective. They agree with the no-growth economists that it is impossible to provide globally both sustainable ecological outcomes and increased GDP growth. However, they consider that capitalism without growth is not an option. Richard Smith (2010: 34) states that "growthmania" is hardly just a dogma, an ideology, a fetish. "Growthmania is a rational and succinct expression of the day-to-day requirement of capitalist reproduction everywhere and in any conceivable capitalism." Indeed, the capitalist orientation toward endless accumulation is implemented through competition between individual capitals.

These contemporary debates are generally not related to the Ricardian argument on the impact of decreasing returns in agriculture over accumulation. However, the empirically well-established link between the rising costs of energy and commodity goods and growth (Baffes and Tassos 2010) operates in a similar manner. More generally, the conceptual framework elaborated by James O'Connor (1988) allows us to make this logical connection. O'Connor states the deepening of the second contradiction of capitalism, a contradiction between capitalist relations (and productive forces) and the conditions of capitalist production. He draws on Polanyian analysis of how capitalist growth generally impaired its own social and environmental conditions as it incorporates in its circuits of valorization fictitious commodities such as land and labor. Capital is not able to prevent itself from impairing these conditions because of "its universalizing tendencies which tend to negate principles of site specificity" (Ibid.: 22) under the life-or-death threat of competitive pressure on individual capitals. The deterioration of these conditions affects then capital accumulation through multiple rising costs, for example the health bill related to the widespread use of pesticides or stress in the workplace, rehabilitation costs of polluted areas, or security expenses resulting from a toxic social environment (for a discussion see Altvater 2001: 14-17).

To what extent could these rising costs be mitigated without impeding accumulation? Concerning the ecological crisis, the issue could be formulated in the following manner: could capitalism afford to pay for a reduction in the global material throughput of economic activity at sustainable levels while perpetuating accumulation? What is at stake here is the prospects for technological improvements, the rebound effect, the cost and the scalability of these technologies on the one hand (Trainer 2008), and demand-driven changes to habits on the other (Nye *et al.* 2010). However, even if sufficient technological improvements or demand-driven changes of habits were available, it is not certain that market mechanisms would be able to implement them. Price mechanisms implemented to mitigate the ecologically destructive effects often perform badly, for example in the case of wetlands in the United States (Kihslinger 2008). The problem arises from the time lag between the destruction of ecological and social resources and the impact on accumulation. Indeed, phenomena such as pollution, climate change, biodiversity, or obesity need to be taken into account even *before* they affect accumulation. There is thus a need not only to confront politically, capitalist vested interests but also to address the institutional problem of cross-period and cross-sector coordination, i.e. the very problem of anarchic coordination of economic activities under capitalism.

Malthus's and Ricardo's emphasis on environmental limits are echoed in contemporary debates about ecological and social sustainability of economic development. A huge strand of literature has addressed these problems in the past decades; however, the analytical link made by Ricardo between rising costs and the exhaustion of capitalist dynamics is most of the time missing. The concept of a "second contradiction" proposed by James O'Connor allows us to give an account of the dialectical relationship between capital accumulation and social and ecological environment degradation; while accumulation tends to alter environmental and social resources – a phenomenon empirically well established through the literature on wealth indicators – this deterioration of the conditions of production has a negative feedback effect on the very possibility of further accumulation. In addition to the uncertainties concerning the availability of a technological fix or the possibilities of sufficient demand-driven changes of habits to tackle these negative externalities from growth, the lack of planning in capitalist economies makes it more difficult to surmount this contradiction.

What is at stake is thus not only the institutional configuration of particular capitalist economies but the "growth obsession" (Altvater 2001) and the competition mechanisms which constitute the very defining principles of this socio-economic system. A recent work by regulationist scholars echoes this point of view when they conclude that in the face of contemporary ecological and social challenges the whole regulationist research strategy is at risk (Rousseau and Zuindeau 2007). Using the regulationist categories to examine Fordist and post-Fordist dynamics from the sustainability viewpoint appears thus disappointing as "the emergence of strong antagonism between these particular modes of development and sustainability issues leads one to ask more fundamentally, whether certain essential features of capitalism are not being questioned" (*Ibid.*: 1).

3. The Distinction Between Productive and Unproductive Labor and its Topicality

The development of numerous services activities such as security, health care, or sanitation services is partly linked to the necessity to guarantee the conditions of capitalist production. This section examines the possibility to link the rising share of services in contemporary economies and the centrality of consumerism to the issue of "unproductive labor" discussed by classical economists and its impact on accumulation.

3.1. The distinction between productive and unproductive labor by classical economists

The distinction between productive and unproductive labor is an important aspect of the classical debates over the prospects for growth. For Adam Smith, there is a substantive distinction between labor in manufacturing, which is able to fuel growth, and domestic labor, which cannot:

> There is one sort of labour which adds to the value of the subject upon which it is bestowed; there is another which has no such effect. The former, as it produces a value, may be called productive; the latter, unproductive labour. Thus the labour of a manufacturer adds, generally, to the value of the materials which he works upon, that of his own maintenance, and of his master's profit. The labour of a menial servant, on the contrary, adds to the value of nothing. (Smith 1776: vol.1, p. 330)

Malthus agrees with Smith about the relevance of the distinction between productive and unproductive labor (Malthus 1820: 43). However, moving beyond the sole emphasis on the work of menial servants, he proposes a wider definition of unproductive "personal services" as "that kind of labour or industry, which (…) does not realize itself on any object which can be valued and transferred without the presence of the person performing such service" (Malthus 1820: 35).

Malthus is in line with Smith in considering that, from the supply side, unproductive labor does not foster growth, but his originality is to stress that unproductive consumers, up to a point, could be useful for accumulation and growth by resolving the recurrent problem of the insufficiency of aggregate demand. Drawing on some pre-Keynesian insights, Malthus points to the positive role of unproductive consumers "not as producers themselves, but as stimulating others to produce, by the power which they possess of making a demand in proportion to the payment they have received" (Malthus 1820: 44). Consequently, a certain proportion of unproductive consumers needs to be maintained in order to stimulate production, depending on the specificity of a given country at a given time (*ibid*.: 412-413).

On the distinction of productive and unproductive labor, Marx partly concurs with Smith and Malthus, but his writings include some fruitful ambivalence. We can thus identify three main analytical lines.

For Marx, the first criterion is that labor produces – or not – some surplus value: "That labourer alone is productive, who produces surplus-value for the capitalist, and thus works for the self-expansion of capital" (Marx 1867: 354-355). Labor is productive as far as it is involved in a social relation of production which generates surplus value and fuels the process of accumulation. This view is in line with Smith's definition of productive labor as adding "to the value of the materials which he works upon, that of his own maintenance, and of his master's profit" (Smith 1776: vol.1, p. 330). But Marx stresses that it is "a relation that has sprung up historically and stamps the labourer as the direct means of creating surplus-value. To be a productive labourer is, therefore, not a piece of luck, but a misfortune" (Marx 1867).

In spite of a lack of clear delimitation, which has promoted a huge and long lasting debate (e.g. Herland 1977; Harvey 2006: 105), Marx makes a second distinction concerning the character – productive or not – of the use value produced. Like Smith, Marx considers that "in all cases where labour is bought in order to be consumed as *use value*, as a *service*, and not in order to replace the value of the variable capital as a *living factor* and to be incorporated into the capitalist production process, this labour is not productive labour" (Marx 1864: 481). However, Marx does not consider the sole services directly consumed by capitalists as unproductive labor but regards also as unproductive all the labor mobilized to their material private consumption *because these commodities do not bring any use value to the reproduction process,* "they do not become a factor of capital" (*ibid.*: 482). This is especially clear as far as luxury goods are concerned. Moreover, he indicates that labor that produces commodities that are unproductively consumed may hinder the reproduction process: "a disproportionate employment of the kind of productive labour which is expressed in unreproductive articles" will have "the result that too few necessary means of subsistence, or too few means of production, etc., are reproduced" (*ibid.*: 484).

This second line of argument concerning use value is at odds with Malthus, for whom the consumption of unproductive classes can counter the insufficiency of aggregate demand. On one hand, Marx gives Malthus credit for having stated the possibility of a general glut (a problem with the realization of surplus value) and for having perceived that the proportion of unproductive labor related to productive labor is an important issue. This proportion depends on the level of capitalist development because "the extraordinary productiveness of modern industry […] allows of the unproductive employment of a larger and larger part of the working-class" (Marx 1867: 293). But on the other hand, Marx criticizes Malthus's idea that crisis can be avoided by increasing the number of unproductive workers. Such an evolution would prevent further accumulation. Now accumulation, and not consumption, is the driving force of production.

The third Marxian argument concerns the quality of the actual capitalist labor process. Here we can be more specific about the definition of productive labor as labor producing surplus value: the very process of mobilizing labor in order to produce surplus value leads to an increase not only in absolute surplus value but also in relative surplus value. The real subjection of labor increases its productive power:

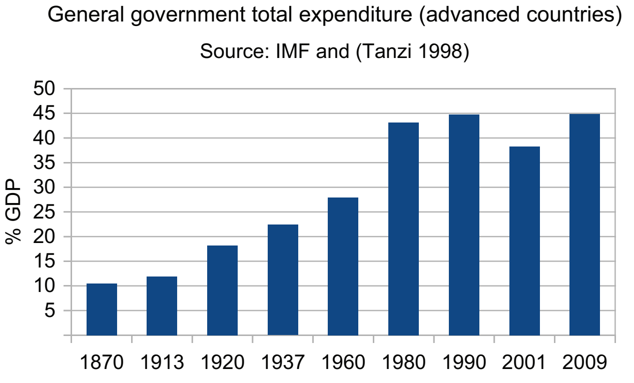

Figure 5. General government expenditure (IMF, Tanzi 1998).

> With the real subsumption of labour under capital there takes place a complete revolution in the mode of production itself, in the productivity of labour and in the relation between capitalist and worker. […] *Labour's social powers of production* are developed, and with labour on a large scale the application of science and machinery to direct production takes place. (Marx 1864: 478)

The above quote allows us to link the relations of production and the content of economic activity. Indeed, following Kaldor's insights (1967) concerning the cumulative dynamics deriving from manufacturing industries, it appears that the prospects for increasing relative surplus value – that is, the productive power of labor – are heterogeneous among sectors. According to this argument, some services activities – for which the possibilities of further development of the productive power of labor are limited – may be considered as unproductive.

3.2. The rising weight of unproductive activities and consumption

How much of this classical discussion is relevant to contemporary debates concerning growth prospects in rich countries? First, we observe that a growing share of economic activity does not produce surplus value. Second, there is an important development of unproductive consumption. Third, the growth rate of the economy to a larger and larger extent is being set by the growth rate of productivity of the so-called "*technology stagnant"* (Baumol, Blackman, and Wolff 1989) services activities.

One of the main characteristics of past decades of declining growth rates in rich economies is that neoliberal policies aimed at reducing the share of public sector expenditure in GDP have failed (Lamartina and Zaghini 2008). This would suggest, beyond the sole phase of industrialization, the resilience of Wagner's law (1912), which predicts that the development of an industrial economy will be accompanied by an increased share of public expenditure, and which is confirmed by long-term trends in developed economies (Tanzi 1998: 5). In industrial countries, public expenditure grew faster than GDP except during the late 1990s (Figure 5). In the past decade, the public expenditure trend has accelerated further, in particular in the aftermath of the crisis. This evolution reveals the dynamism of social demand for public services. In public administration labor is not exchanged against capital. It does not create surplus value. The growing importance of public expenditures means thus that public activities attract more and more important productive resources, which implies that a an increasing share of productive forces is channeled out of the capitalist process.[5]

[5]This is not to contradict the role of such public expenditures as an automatic stabilizer in downward phases of the conjuncture or, more widely, as demand stimuli for private investment.

In addition, it is necessary to consider the dramatic growth, during the past decades, of private activities, such as banking, finance, insurance, and trading which, for classical economists, do not produce value but, on the contrary, capture a share of surplus value. From this point of view, Crotty shows that the liberalization of financial services and the subsequent tremendous rise of their weight in the economies makes the thing even worse. The new financial architecture reproduces itself over time with frequent and enlarging government bailouts (Crotty 2008: 55). Dysfunctional as it is and because of the explicit and implicit subsidies of the public sector, the liberalized financial system could be thought to *subtract* value from the economy (Haldane and Madouros 2011).

At a second level, the boom in consumerism may have fostered unproductive consumption patterns, which do not contribute to the reproduction of labor power, or even impact negatively on its reproduction; consider, for example, the rise in consumption of unhealthy food products. The rise in inequalities has been accompanied by a boom in conspicuous consumption, which has spread throughout all of society based on imitative behavior, mirroring the predatory motive of emulation highlighted by Thorstein Veblen in his 1899 *Theory of the Leisure Class*. Moreover, the sophistication and huge development of marketing and advertising – what Veblen (1923) calls "salesmanship" – mean that consumption behaviors are widely shaped by the short-run needs of competing firms, independent of the medium- and long-run productive requirements of capital expansion.

Finally, some recent evidence (Montresor and Vittucci Marzetti 2011) for OECD countries confirms the so-called Clark-Fischer hypothesis (Clark 1940) which assumes that economic development is characterized by a shift from agriculture to manufacturing and from manufacturing to services. In the regulationist perspective, Robert Boyer stresses this phenomenon as he emphasizes the rise of anthropogenetic services such as education, health, and leisure in modern economies (Boyer 2002) while Pascal Petit (1988) has pointed out the limited prospects of return to scale in services activities. This deindustrialization-tertiarization is consistent with Baumol's argument (1967; Baumol *et al.* 1989; Rowthorn and Ramaswamy 1997): as the economy grows, the weight of service activities, in which productivity improvement possibilities are limited, progresses. It suggests an inexorable process of growth slowdown. In a Marxian perspective, such a shift means that the extent to which the real subjection of labor increases its productive power is less important in most service industries than in manufacturing, although significant socio-economic and technological breakthroughs tend endlessly to redefine the frontier between stagnant and progressive activities.

The classical dichotomy between productive and unproductive labor points to three relevant phenomenons in developed economies. Following Smith's intuition expanded by Malthus and Marx, the rising weight of services activities – public or private – which do not contribute directly to surplus value creation, constitutes a first limit to capitalist accumulation. Second, the problem that some consumption patterns do not contribute to the reproduction of the forces of production has been identified by Marx and Veblen. It seems to acquire a great importance with the widespread diffusion of consumerism. However, among radical thinkers, these two dimensions have not been much discussed in their generality, as long-term trends which alter the possibility of further capitalist expansion. The third mechanism, the growing share of so-called stagnant services activities – i.e. activities where the prospects for an increase in the productive power of labor are reduced – has attracted more attention, in particular within the regulationist tradition. However, no systematic discussion has occurred to point out the implications of such a structural shift on the mounting difficulties of capitalist accumulation in developed economies.

4. Conclusion

Beyond the crisis, the case for the stationary state in rich economies (Balakrishnan 2009) relies on several long-term demographic, social, and ecological trends. However, much of the contemporary debate focuses on the desirability or the possibility of growth rather than on the inner dynamics of capitalism (Daly 1974, 1991; Victor 2008; Jackson 2009). In this article we relied on an analysis of classical economists to highlight relevant mechanisms and issues concerning the prospects for capitalist dynamics which might help us to a better understanding of the contemporary situation of rich economies. In particular, we stressed the importance of competition dynamics, the degradation of environmental and social conditions, and the growing importance of activities which were characterized as unproductive by classical economists. The careful discussion by Smith, Ricardo, Malthus, and Marx of the mechanisms that might be driving these dynamics provides a fruitful research agenda at a time when the failure to provide strong growth is a common feature of the major Northern countries. To pay attention to these warnings by classical economists is all the more relevant when innovation and the gains from international trade, the main counter-tendencies to stagnation they identified (Mill 1848; Ricardo 1817), seem to be depleted by intellectual monopolization on the one hand (Pagano and Rossi 2009), and consolidation of value chains and rising wages in the developing world on the other (Milberg and Winkler 2010).

Some contemporary radical scholars such as Crotty, Brenner, O'Connor, and Freeman have mobilized explicitly or implicitly the arguments of the classical authors. However, this is not the case in most of the works in the tradition of the regulation and the SSA schools. The main strength of these currents is to accurately examine the institutional forms that contain partially and temporarily the contradictions of the accumulation process. But in doing so they have shifted their attention away from the underlying forces of capitalist dynamics which lie behind institutional forms. This research strategy prevents them from taking seriously into account the tendencies toward stagnation which were so important for classical economists and, as we have shown, appear to be relevant empirical issues in today's developed economies.

Hence, this article underscores the need for radical political economy to engage theoretically and empirically the discussion of the causes of exhausted accumulation in developed economies. In our view, further economic research on the prospects for growth should discuss the hypothesis that capitalist accumulation can now only be predatory, following a path of "accumulation by dispossession" (Harvey 2003; Glassman 2006). Another urgent task for radical political economy would be to address more directly the problem of the transition from accumulation regimes toward a post-capitalist regime of reproduction. In order to study these two problems, it would be highly valuable to mobilize the insightful inheritance of the Gramscian-regulationist and the SSA perspectives, as they both help to understand how institutional configurations contribute to shape macroeconomic dynamics.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

References

Aglietta, M., L. Berrebi, and A. Cohen. 2009. Banques centrales et mondialisation. *Groupama expertises* n°7.

Altvater, E. 2001. The growth obsession. *Development Research Series Working Paper 101*, Aalborg University, Denmark: Research Center on Development and International Relations (DIR).

Alvey, J. E. 2003. *Adam Smith: Optimist or pessimist?* Aldershot: Ashgate.

Arrow, K., P. Dasgupta, L. Goulder, G. Daily, P. Ehrlich, G. Heal, S. Levin, K.-G. Mäler, S. Schneider, D. Starrett, and B. Walker. 2004. Are we consuming too much? *The Journal of Economic Perspectives* 18 (3): 147-172.

Baffes, J., and H. Tassos. 2010. Placing the 2006/08 commodity price boom into perspective. *Policy Research Working Paper Series 5371*, The World Bank.
Balakrishnan, G. 2009. Speculations on the stationary state. *New Left Review* 59: 5-26.
Baumol, W. 1967. Macroeconomics of unbalanced growth: The anatomy of urban crisis. *American Economic Review* 57: 415-426.
Baumol, W. J., B. S. A. Blackman, and E. N. Wolff. 1989. *Productivity and American leadership*. Cambridge: The MIT Press.
Boyer, R. 2008. Feu le régime d'accumulation tiré par la finance. *Revue de la régulation* [Online], 5 | 1er semestre, Online since 10 April 2009, connection on 28 February 2012. URL: http://regulation.revues.org/7367
Boyer, R. 2002. *Croissance début de siècle. De l'octet au gène*, Paris: Albin Michel.
Bowles, S., and H. Gintis. 1986. *Democracy and capitalism*. New York: Basic Books.
Brenner, R. 1998. The economics of global turbulence. *New Left Review* 229 (special issue): 1-265.
Brenner, R. 2006. *The economics of global turbulence*. New York: Verso.
Clark, C. 1940. *The conditions of economic progress*. London: McMillan.
Crotty, J. 2008. Structural causes of the global financial crisis: A critical assessment of the new financial architecture. *PERI Working paper series* 180. Retrieved from: http://www.peri.umass.edu/fileadmin/pdf/working_papers/working_papers_151-200/WP180.pdf
Crotty, J. 1999. Review of Robert Brenner's *Turbulence in the world economy. Challenge* 42(3): 108-19. Retrieved from: http://people.umass.edu/crotty/BR-chlge-ult.pdf
Crotty, J. 2000. Slow growth, destructive competition, and low road labor relations: A Keynes-Marx-Schumpeter analysis of neoliberal globalization. *Political Economy Research Institute Working Paper* n°6.
Crotty, J. 2002. Why there is chronic excess capacity. *Challenge* 45(6): 21-44.
Daly, H. 1974. The economics of the steady state. *The American Economic Review* 64 (2): 15-21.
Daly, H. 1991. *Steady-state economics: Second edition with new essays*. Washington, DC: Island Press.
Dockès, P., and B. Rosier. 1983. *Rythmes économiques, crise et changement social: Une perspective historique*. Paris: La Découverte.
Duménil, G. 1978. *Le concept de loi économique dans '*Le Capital.*'* Paris: François Maspero.
Duménil, G., and D. Lévy. 2010. *The crisis of neoliberalism*. Harvard University Press.
Duménil, G., M. Glick, and D. Lévy. 2001. Brenner on competition. *Capital and Class* 74: 61-77.
Durand, C., and P. Légé. 2010. Vers un retour de la question de l'état stationnaire? Les analyses Marxistes, post-Keynesiennes et régulationnistes face à l'après-crise. In *Les enseignements de la crise des subprimes*, ed. A. Diemer and S. Dozolme, 153-184. Paris: Editions Clément Juglar.
Fine, B., C. Lapavistas, and D. Milonakis. 2001. Addressing the world economy: Two steps back. *Capital and Class* 67: 47-90.
Foster, J. B., and F. Magdoff. 2008. Financial implosion and stagnation. *Monthly Review* 60, n°7.
Freeman, A., and G. Carchedi. 1995. *Marx and non-equilibrium economics*. London: Elgar.
Freeman, A. 1999. Crisis and the poverty of nations: Two market products which value explains better. *Historical Materialism* 5, n° 1: 29-75.
Freeman, A., A. Kliman, and J. Wells. 2003. *The new value controversy and the foundations of economics*. London: Elgar.
Gadrey, J., and F. Jany-Catrice. 2005. *Les nouveaux indicateurs de richesse*. Paris: La Découverte.
Glassman, J. 2006. Primitive accumulation, accumulation by dispossession, accumulation by 'extra-economic' means. *Progress in Human Geography* 30: 608-625.
Gordon, D., R. Edwards, and M. Reich. 1982. *Segmented work, divided workers*. New York: Cambridge University Press.
Haldane, A., and V. Madouros. 2011. What is the contribution of the financial sector? *Vox*, 22 November. Retrieved from: http://www.voxeu.org/index.php?q=node/7314
Harari-Kermadec, H., and P. Légé. 2011. Capacity utilization and the motion of capital. IIPPE 2nd International Conference in Political Economy, Istanbul, May 20-22.
Harpham, E. J. 2007. Gavin Kennedy, *Adam Smith's lost legacy* (review). *The Adam Smith Review 3*, Routledge: 215-224.
Harvey, D. 2006. *Spaces of global capitalism*. London: Verso.
Harvey, D. 2003. *The new imperialism*. Oxford: Oxford University Press.

Harvey, D. [1982]2006. *The limits to capital*. London: Verso.

Heilbroner, R. L. 1973. The paradox of progress: Decline and decay in the *Wealth of nations*. *Journal of the History of Ideas* 34: 243-62.

Herland, M. 1977. A propos de la définition du travail productif. Une incursion chez les grands anciens. *Revue économique* 28 (1): 109-133.

Hilferding, R. [1910]1981. *Finance capital. A study of the latest phase of capitalist development*. London: Routledge.

Husson, M. 2010. The debate on the rate of profit. *International Viewpoint* 426, July.

Jackson, T. 2009. *Prosperity without growth: Economics for a finite planet*. London: Earthscan.

Jessop, B., and N. G. Sum. 2006. *Beyond the regulationist approach*. London: Elgar.

Kaldor, N. 1967. *Strategic factors in economic development*. Ithaca, NY: Cornell University Press.

Kennedy, G. 2005. *Adam Smith's lost legacy*. New York: Palgrave Macmillan.

Kihslinger, R. 2008. Success of wetland mitigation projects. *National Wetlands Newsletter* 30 (2). Washington, DC: Environmental Law Institute.

Kotz, D., and M. Wolfson. 2010. A re-conceptualization of SSA theory. In *Contemporary capitalism and its crises: Social structure of accumulation theory for the twenty-first century*, ed. T. McDonough, M. Reich, and D. Kotz. Cambridge: Cambridge University Press.

Kotz, D. 2011. Over-investment and the economic crisis of 2008. *World Review of Political Economy* 2 n°1: 5-25.

Lamartina, S., and A., Zaghini. 2008. Increasing public expenditures: Wagner's law in OECD countries. *CFS Working Paper Series*, 2008/13, Center for Financial Studies.

Lawn, P., and M. Clark. 2010. The end of economic growth? A contracting threshold hypothesis. *Ecological Economics* 69: 2,213-2,223.

Malthus, T. 1820. *Principles of political economy considered with a view to their practical application*. London: John Murray.

Malthus, T. [1798]1999. *An essay on the principle of population*. Oxford: Oxford World's Classics reprint.

Marglin, S., and J., Schor, eds. 1990. *The golden age of capitalism: Reinterpreting the postwar experience*. Oxford: Clarendon Press.

Martínez-Alier, J., U. Pascual, F.-D. Vivien, and E. Zaccai. 2010. Sustainable de-growth: Mapping the context, criticisms and future prospects of an emergent paradigm. *Ecological Economics* 69 (9): 1,741-1,747.

Marx, K. [1847]1955. *The poverty of philosophy, answer to the Philosophy of poverty by M. Proudhon*. Progress Publishers. Retrieved from: http://www.marxists.org/archive/marx/works/download/pdf/Poverty-Philosophy.pdf

Marx, K. [1857]1973. *Outlines of the critique of political economy*. Trans. M. Nicolaus, Penguin edition. Retrieved from: http://www.marxists.org/archive/marx/works/1857/grundrisse/index.htm

Marx, K. 1864. *Draft chapter 6 of* Capital, *results of the direct production process*. Volume 34 of *Marx and Engels collected works*, translated in English by B. Fowkes. Retrieved from: *http://www.marxists.org/archive/marx/works/1864/economic/index.htm*

Marx, K. 1867. *Capital, volume I*. First English edition of 1887 by F. Engels. Moscow: Progress Publishers. Retrived from : http://www.marxists.org/archive/marx/works/download/pdf/Capital-Volume-I.pdf

Marx, K. 1894. *Capital, volume III*. Edited and completed by F. Engels. New York: International Publishers. Retrieved from: http://www.marxists.org/archive/marx/works/download/pdf/Capital-Volume-III.pdf

Mazier, J., M. Basle, and J.-F. Vidal. [1984]1996. *Quand les crises durent*, 2d ed. Paris: Economica.

Meek, R. L. 1977. *Smith, Marx and after: Ten essays in the development of economic thought*. Chapman & Hall.

Milberg, W., and D. Winkler. 2010. Economic and social upgrading in global production networks: Problems of theory and measurement. Unpublished paper.

Mill, J. S. [1848]1965. *Principles of political economy*. In *The collected works of John Stuart Mill, vol. II & III*, ed. J. Robson. Toronto: Toronto University Press.

Montresor, S., and G. Vittucci Marzetti. 2011. The deindustrialisation/tertiarisation hypothesis reconsidered: A subsystem application to the OECD7. *Cambridge Journal of Economics* 35(2): 401-21.

Nye, M., L. Whitmarsh, and T. Foxon. 2010. Sociopsychological perspectives on the active roles of domestic actors in transition to a lower carbon electricity economy. *Environment and Planning A* 42: 697-714.

O'Connor, J. 1988. Capitalism, nature, socialism: A theoretical introduction. *Capitalism Nature Socialism* 1: 11-39.
Pagano, U., and M. A. Rossi. 2009. The crash of the knowledge economy. *Cambridge Journal of Economics* 33(4): 665-83.
Petit, P. 1999. Structural forms and growth regimes of the post-Fordist era. *Review of Social Economy* 57(2): 220-43.
Petit, P. 1988. Tertiarisation, croissance et emploi: quelles nouvelles logiques? *Revue d'Économie Industrielle* 43 (1): 164-178.
Ricardo, D. [1817]1973. *On the principles of political economy and taxation*. London: Everyman Classics.
Ricardo, D. 1828. Letter to Trowel. In *Works and correspondence of D. Ricardo*, vol. VIII, ed. P. Sraffa, 1,951-1,955. Cambridge: Cambrige University Press.
Rousseau, S., and B. Zuindeau. 2007. Théorie de la régulation et développement durable. *Revue de la régulation* n°1, Varia.
Rowthorn, R., and R. Ramaswamy. 1997. Deindustrialization: Causes and implications. *IMF Working Paper, 9742*.
Shaikh, A. 2008. Competition and industrial rates of return. In *Issues in finance and industry, Essays in honour of Ajit Singh*, ed. P. Arestis and J. Eatwell, 167-94. London: Palgrave Macmillan.
Simms, A., V. Johnson, and P. Chowla. 2010. Growth isn't possible. *The great transition report 2010*. London: New Economics Foundation.
Smith, A. [1776]1982. *An inquiry into the nature and causes of the wealth of nations*. The Glasgow edition, Oxford University Press.
Smith, R. 2010. Beyond growth or beyond capitalism? *Real-World Economics Review* 53.
Stiglitz, J., J.-P. Fitoussi, and A. Sen. 2010. *Report by the Commission on the Measurement of Economic Performance and Social Progress*.
Tanzi, V.. 1998. The demise of the nation state? *IMF Working Paper* No. 98/120.
Trainer, T. 2008. A short critique of the Stern Review. *Real-World Economics Review* 45.
Veblen, T. [1923]1997. *The absentee ownership: Business enterprise in the recent times: The case of America*. London: Transaction Publishers.
Veblen, T. [1899]1994. *The theory of the leisure class*. New York: Dover Publication.
Victor, P. 2008. *Managing without growth*. Cheltenham: Edward Elgar.
Wagner, A. H. 1912. *Les fondements de l'économie politique*. Paris: Girard & Brière, vol. III.
Walker, R. 1999. Capitalism's recurrent self-criticism: An evaluation of Bob Brenner's *Origins of global turbulence. Historical Materialism* 5 (1): 179-210.
Zacharias, A. 2002. Competition and profitability: A critique of Robert Brenner. *Review of Radical Political Economics* 34: 19-34.

Author Biographies

Cédric Durand is Associate Professor in Economics at the University of Paris-Nord (CEPN–CNRS/Paris-XIII) and teaches development theories in the EHESS. He has published several works on the post-soviet transformation and the globalization of the retail sector. His current research interests concern the link between financialization and globalization and the political economy of the crisis in Europe.

Philippe Légé is Associate Professor in Economics at the University of Picardie (UPJV, Amiens) and a member of CRIISEA. His main research interests concern the history of economic thought and the analysis of the current crisis. He has written several articles criticizing the liberalism of Friedrich Hayek. He is a board member of the French Association of Political Economy.