UNIVERSITÄT BERN

ESPACE
Economies in Space - Working Papers in Economic Geography

No. 2008-3

The power of finance and uneven development

Christian Zeller

15 January 2008

Universität Bern, Institute of Geography, Economic Geography and Regional Studies

http://www.geography.unibe.ch/econgeo

The power of finance and uneven development

Institute of Geography
Economic Geography and Regional Studies
University of Bern
Hallerstrasse 12
CH-3012 Bern
zeller@giub.unibe.ch
Tel. 031/ 631 85 56

Abstract

This contribution argues that uneven development must be analyzed in the context of the emergence of a finance-dominated accumulation regime. The global economy is conceived as a totality, in its historical dynamics and with its reciprocal effects for different actors on various scales. In the course of neo-liberal deregulation policies and far-reaching institutional changes, concentrated financial capital increased its power. Institutional investors such as mutual and pension funds took command over accumulation processes, investments, the division of profits and income distribution. Financial capital today exerts its power on a global scale and reshuffles uneven development. Shareholder value-driven corporate governance shortens the temporal horizons of investments and returns. In doing so it also influences innovation processes. The increasing power of concentrated financial capital is accompanied by an expansion of property rights and processes of commodification. Capital accumulation increasingly occurs through rent-based income, which in turn is based on different appropriation processes.

This new configuration of capitalism is accompanied by the emergence of new institutions and forms of state power. Moreover, it carries major consequences for key relations in capitalism, including income distribution; the market regime and industrial organization; innovation processes and technological evolution; the relations between capitalist and non-capitalist sectors, and global uneven development. This paper aims to contribute to a renewed critical political economy of uneven development. Particularly considered are processes of creation, capture and transfer of values and resources.

Keywords: finance-dominated accumulation regime, accumulation by dispossession, uneven development, rents, financial flows

1. Introduction

In the course of the massive economic downturn of the mid-1970s and subsequent accelerated structural change, broad discussions about the development dynamics of capitalism emerged. Based on different theoretical explanations, it was suggested that capitalism should be understood as a sequence of specific historical configurations. Various interpretations of long wave theories and regulation theory were controversially discussed among scholars coming from different backgrounds of critical political economy.

The regulation school originating in France soon won a certain influence and later fanned out into diverse theoretical directions, with effects also in economic geography (Lipietz 1986; Moulaert/Swyngedouw 1989; Boyer 1992; Lipietz 1992; Swyngedouw 1992; Tickell/Peck 1992; Benko 1996; Walker 1995). Various explanations and interpretations of uneven capitalist development were heatedly discussed (Peet/Thrift 1989). Since the mid-1990s regulationist and other critical interpretations of political economy lost influence in economic geography. However, there is a widespread rejection of neoclassical economic thought in economic geography. In the last few years our understanding of socio-economic processes in spaces was enriched and enhanced by valuable contributions influenced by old and new economic institutionalism (Amin/Nigel 1994; Martin 2000; Martin/Sunley 2003; Cumbers, et al. 2003), economic sociology (Peck 2005; Grabher 2006) and evolutionary economics (Boschma/Frenken 2006; Martin/Sunley 2006). But few of these authors embedded their work in a broader understanding of socio-economic context and historical configuration of capitalism.

Economic geography has been predominantly shaped by the debates on so-called *relational, institutional* and *evolutionary turns*. Thus interest has shifted away from critical analysis of uneven development toward the investigation of innovation processes, knowledge flows, the role of proximities, path-dependencies, as well as regional and global production networks. This orientation was often characterized by the ambition to contribute to an improvement of regional and entrepreneurial competitiveness and performance, or to a socially more coherent regional development.

Recent studies in financial geographies focus on global hierarchies and networks of financial centers (Leyshon/Thrift 1995; Faulconbridge, et al. 2007); the governance and competitiveness of financial centers (Grote 2007); the importance of knowledge flows and proximities for managing financial services (Grote 2003); the governance of pension funds (Clark 2003); and corporate governance models in different types of capitalism (Wojcik 2006). However, much less effort went into understanding the power of financial capital in shaping broader societal conditions and uneven development, the distribution of income, the steering of innovation processes and the perspectives of socially and ecologically sustainable development. The intersection and articulation between the circuits of finance and industrial capital and their spatial implications have received limited attention (Pike 2006; Theurillat/Corpataux/Crevoisiser 2007).

Critical approaches survived in specific fields. Various authors continued to argue for a Marxian political economy (Swyngedouw 2000b; Hudson 2006). A critical *labor geography* emerged (Herod 1998; Wills 1998; Walker 1999; Castree, et al. 2004). Controversial discussion about power and scales developed (Swyngedouw 1997; 2000a), diverse and critical appraisals of the global economy and global production networks were suggested (Peck/Wai-Chung Yeung 2003), a debate on neoliberalism was launched (Peck/Tickell 2002), and critical elaborations on international organizations were presented (Peet 2003; Peet/Hartwick 1999). The role of nature in capital's attempt to extend its realm of commodities to new fields was increasingly explored (Castree 2003). Recently, Harvey (2003) encouraged debate about the *new imperialism* and the foundations of neoliberalism (Harvey 2005).

Paradoxically, in a period when organizational centralization and spatial concentration of income, resources and wealth has reached a degree that threatens the coherence of many societies, economic geography has largely abandoned the challenge of analyzing uneven development on a global scale. In contrast to the above-mentioned analyses in the 1980s, which were influenced by critical political economy approaches, the periodization of capitalism today, the historical characterization of the current phase and the question of how global dynamics are related to developments on other scales are rarely treated in economic geography. While substantial changes in the way capital exerts its social power became more and more obvious, researchers in economic geography focused on micro-level analysis, abstracting from broader societal contexts.

This paper aims to contribute to a renewal of critical political economy in economic geography. It submits an outline for understanding the current phase of capitalism, based on regulation-theory-inspired interpretations, non-deterministic long-wave approaches, Harvey's concepts of *spatio-temporal fixes* and accumulation by dispossession, as well as on institutionalist concepts (Martin 2000). Referring to recent debates in French critical political economy, I also intend to bridge debates which unfortunately, because of persistently strong language barriers, often develop separately.

I argue that the uneven development necessary to capitalism has to be analyzed in connection with the emergence of a finance-dominated accumulation regime. The current phase of capitalism is characterized by an increased power of concentrated placement capital in the hands of institutional investors. They control large companies by means of shareholder value-driven corporate governance, which guarantees that an increased share of profits flows towards shareholders at the expense of reinvested capital and of workers' wages. The increasing importance of rent-based income affects income distribution, market regime and industrial organization, technological evolution, the relations between capitalist and non-capitalist areas as well as uneven development on all scales. Concentrated placement capital strives to increase the appropriation of surplus value on a global scale. These processes depend on power relations and on the role of the state and institutions which also influence the contexts in which such power relations are formed.

This approach can be summarized as follows: Financial capital strives to gain interest and rent yields. Such income is based on property rights. The extraction of values and resources based on property rights is organized on a global scale. This means that strong financial organizations centralize values and resources from all attractive places and areas of the world. In this context, labor relations and the way firms operate and distribute their profits as well as the entire income distribution system have changed. In addition, concentrated placement capital valorizes itself based on different dispossession procedures. Capital increasingly relies on accumulation processes which consist of acquiring resources and values produced in non-capitalist social contexts. The extension of property rights is one form of accumulation by dispossession.

I argue for understanding the capitalist world-economy both as a totality and in terms of its historical dynamic. In contrast to traditional, regulationist and variety of capitalism approaches, the aim is not to characterize different national or regional models of capitalism and to size up manoeuvrability for new modes of regulation. Instead, I want to describe key characteristics of the new configuration of capitalism, which of course are mediated nationally or regionally in specific ways. I hope to direct attention to value and resource flows in the context of uneven development. The outline presented here should also allow the integration of empirical studies on international capital flows, production networks, labor relations and innovation processes into a broader theoretical and conceptual framework, one that combines micro- and macroeconomic processes. In this sense, the aim is also to contribute to ongoing debates on orientation and perspectives in economic geography.

The paper is organized as follows. The second section explains the origin of a finance-dominated accumulation regime and presents the key characteristics of this new configuration of capitalism. One of them, for example, is the increased importance of rent-based value capture and income on a global scale. The third section explains how concentrated placement capital shapes income distribution, uneven development, relations to non-capitalist sectors, market conditions and technological evolution. The concluding section presents some key problems for further research.

2. Concentrated placement capital, division of profits and dispossession

Capitalism changes over time. The structural changes, which occurred in the late 19th century, motivated scholars to outline theories of imperialism. Long wave theories tried to capture the structural changes and the broader socio-economic conditions for the dynamics of profitability (Mandel 1995) as well as the emergence of new techno-economical paradigms (Freeman/Louça 2002; Perez 2002). The regulation school, which emerged in the late 1970s, had the ambition of understanding the crisis of Fordism and recognizing possible outcomes of this crisis.

The regulation school assumes that capitalism consists of a sequence of relatively stable and consistent developmental stages characterized by a specific accumulation regime and a specific regulation mode. An accumulation regime enables a certain macroeconomic coherence and a phase-wise stability within the planless and crisis-prone movements of capital accumulation. The dynamics of every accumulation regime is based on a system of technological, societal, and economic principles (Boyer 1988: 71; 1992: 191; 2004). The accumulation process is regulated by a historically developed arrangement of institutions, which constitutes a mode of regulation. The mode of regulation contributes to the coordination of the numerous local, potentially contradictory decisions of single economic entities. The components of the accumulation regime and the mode of regulation interact within an arrangement of systemic relations and institutional forms, such as the monetary regime, the wage relation, forms of competition, the national and international role of the state and integration into the international regime (Boyer/Saillard 2002: 60ff).

The approach presented here uses regulation theory's key concept of accumulation regime, but does not share its tenet that Fordism is followed by a new stable and coherent mode of development. On the contrary, I argue that the new finance-dominated configuration of capitalism is unstable, increases inequality and creates new patterns of unevenness on all geographical scales. A second reservation concerns scale. Capitalism cannot be analyzed as an addition of national states or in its different varieties. The challenge of analyzing the current phase of global capitalism is to understand capitalism and the world economy as a strongly hierarchized, systemic totality that combines both economic relationships and political conditions, i.e. not only relationships between states but also between classes. I argue for understanding the globalization of capital in close relation to the emergence of a hierarchical, finance-dominated accumulation regime (Chesnais 2004a). This section explains the emergence and basic features of this regime.

2.1 Rising financial capital

Towards the end of the 1960s, the coherence of Fordism began to dwindle. The first general recession in the first half of the 1970s was characterized by a simultaneous fall of profit and growth rates as well as rising unemployment (Duménil/Lévy 2003a). Since the mid-1970s, crises have afflicted the progression of the world economy more strongly than during the previous period. In response, capital has endeavored to clear away the barriers which prevented profit rate increase. To achieve this, capital strived to open up new fields and to make the existing utilization channels more profitable.

Several economic and institutional processes contributed to the centralization and concentration of financial capital in the hands of financial companies and institutional investors. In a broad sense, financial capital can be defined as concentrated capital in the form of money whose owners expect revenues (interests, dividends) based on ownership and/or a yield on the sale of property or creditor title (Robinson 1956: 247). Thus, financial accumulation means the centralization in specialized institutions of not-reinvested industrial profits and not-consumed revenues for the purpose of valorization as financial placements, such as devises, bonds and stocks outside the production of goods and services (Chesnais 2004b: 17).

The first precondition for the increasing power of financial capital was the accumulation of capital in the form of productive capacity and liquid assets nurtured by the long-lasting, particularly high growth rates of the “golden era”. A second element was the formation of the Eurodollar market outside the national capital markets and the control area of the national banks, which set the bases for financial globalization and for internationalized financial and money markets. Third, the debt payments of peripheral countries and even more the budget deficits in the capitalist core countries considerably contributed to the international centralization and concentration of money. In the mid-1970s, capital owners from rich countries saw themselves not only forced to enlarge the markets for their products but also to profitably invest the enormous amounts of available capital, primarily the money that petro-monarchies had placed in U.S. and European banks. A solution consisted in lending this money to the peripheral countries to stimulate the demand for products produced in metropolitan countries (Chesnais 2004b). This process was an expression of efforts to postpone over-accumulation, temporally and spatially creating new *spatio-temporal fixes* (Harvey 1982: chapter 13, 442ff; 2003). This recycling of petro-dollars rapidly led to an uncontrolled increase in the indebtedness of many peripheral countries. This was reinforced all the more when the U.S. abruptly and strongly increased the interest rates in 1979 and in subsequent years (Duménil/Lévy 2004c). The debt spiral quickly began to turn infernally. These events corresponded to simple piracy and accumulation by dispossession (Harvey 2003). The indebtedness then intensified through the recession of the early 1980s. After the Mexican crisis in 1982, the IMF began to force indebted countries to accept the notorious structural adjustment programs. The consequence was an almost permanent reconstitution of the external debt and a standstill in the economies concerned. Typically enough in Latin America, the 1980s were called the “lost decade” (Toussaint 2000).

But it was in the capitalist core countries where the creation of credit money through gigantic debt by means of government bonds, particularly US-government bonds to finance the federal deficit, enabled an enormous capital flow into the financial sector. In terms of absolute figures for financial transfers, the core capitalist countries’ public debt was more important than the debt of the peripheral countries. The installation of a bond market completely open to international financial investors was aided by the “securitization” of the effects of public debts. This “securitization”, the rise of interest rates and the liberalization of international capital movements took place in a period when pension funds (in Anglo-American countries) and insurances (in most other countries) increasingly were looking for large and secure opportunities to place huge amounts of monetary capital. In subsequent years, both in the peripheral and in the capitalist core countries, public debt continuously nurtured financial accumulation. Public debts also facilitated austerity policies through the shortening of public expenditures and privatizations (Chesnais 2004b: 21ff).

Subsequently, a series of institutional changes were necessary for the rising power of financial capital. First, the emergence of specialized stock and bond markets offered privileges and economic power to placement capital based on liquidity – financial investors in normal periods, apart from financial crises, could buy and sell arbitrary amounts of bonds, stocks or other types of securities within the shortest possible time (Orléan 1999). A second element in financial accumulation were the private, capital-fed retirement systems that have become increasingly important since the end of World War II in Anglo-American countries, Japan and Switzerland, and are now also implemented or reinforced in France, Germany and many other countries. They centralize mandatory individual savings from the salaries of workers (Tab. 1). The search for attractive opportunities for placement pension funds represents a major demand for bonds and stocks. From the start, the choice to establish and reinforce private pension funds was a political one in favor of financial markets (Clark 1998; Blackburn 2002; Husson 2003; Sauviat 2004; Theurillat/Corpataux 2007). In the hands of fund managers, employee savings are transformed into capital. This mutation transforms the pension funds into non-banking financial organizations trying to maximize returns. Without any clear awareness, in most cases, workers take part in institutions which centralize extracted revenues based on the exploitation of other workers, either living in the country where the fund was created or in places where the fund realizes its placements and speculations. The political and ideological implications of private capital-fed retirement systems are far-reaching. Each pensioner is given two identities: one as a worker and one as a beneficiary of the bourgeois rentier classes (Chesnais 2004b: 33). The unresolved problem of sustainability of pension funds and guaranteed pension benefits has been controversially discussed in regard to demographic changes and the adequacy of nation state policy (Clark 2003; Engelen 2003). The position defended here rather emphasizes the question of redistribution of wealth and financial flows than demographic change.

Institutional investors have become dominant shareholders within equity markets (for example in the UK, see Pike 2006: 203). The proportion of assets managed by institutional investors expresses the rising power of financial capital. With regard to monetary assets and GDP, they showed a strong increase between 1985 and 2000. After they recovered from the crisis in 2001-2003, they rose again in most OECD countries (Tab. 1 and 2).

The tremendous increase in importance of concentrated financial capital and the accompanying institutional changes could only be enforced based on a fundamental change in political power relations. The conservative counter-reform from 1979/80 onwards, first in the US and the UK and then in most other countries, as well as massive defeats of the workers' movement, profoundly changed the political landscape in most OECD-countries. With the rise of neoliberalism, forces which sought to improve capital profitability through radical liberalizations, de- and re-regulations and privatizations asserted themselves (Duménil/Lévy 2004c; Harvey 2005). These political changes enabled the creation of new institutions, such as the WTO, which are indispensable to the new regime. The liberalization policies of the G7 states in the 1980s and 1990s provided capital with special privileges as well as enormous additional economic and social power. The most powerful states, first of all the U.S., began to liberate capital movements. Pressured by the IMF, the World Bank and the U.S., the so-called emerging countries were also forced to liberate and deregulate their financial systems The external and internal permeability of national systems, previously closed and compartmented, led to the emergence of a global financial space (Chesnais 1997; 2004a; 2004b: 25ff).

Tab. 1: Assets of institutional investors in percent of GDP in selected countries (G7+ Australia, Netherlands and Switzerland)

	1981	1986	1990	1996	2000	2001	2005	2006
Australia	-	-	47.2	92.3	129.6	129.7		
Canada	35.1	49.5	57,7	93.2	113.7	115,8	–	
France	11.4	34.6	50,8	86.6	131.8	131,8	144	
Germany	18.4	27.2	32.8	50.6	79.8	81,0	63	
Italy	–	10.8	12.5	39	97.8	94,0	–	
Japan	–	-	82,3	88.4	97.7	94,7	126	
Netherlands	77,5	109	119,3	167.5	167.9	190,9	–	
Switzerland	3.9	8.6	110.9	164.2	222.4	232,7	–	
United Kingdom	51.4	108.9	103,9	172	212.8	190,9	178	
USA	69,9	102.4	113,2	162.9	198.7	191,0	213	

Source: OECD: Institutional Investors Statistics, table S2;

Tab. 2 Assets of pension funds in percent of GDP in selected countries (G7+ Australia, Netherlands and Switzerland)

	1981	1986	1991	1996	2000	2001	2005	2006
Australia			21.2	44.2	67.0	75.3	60.8	67.5
Canada	16.8	24.4	31.4	41.7	48.3	103.9	102.1	102.7
France						3.8	5.8	6.9
Germany	1.8	2.7	2.9	3.0	3.4	3.4	4.0	4.2
Italy			4.0	3.5	4.5	3.1	3.0	3.3
Japan			11.5	15.0	18.5	14.2	6.6	-
Netherlands	49.9	69.7	73.5	93.1	113.7	102.6	122.5	130.0
Switzerland		52.9 (1)	61.7 (1)	87.3	112.0	104.4	119.1	122.1
United Kingdom	22.4	51.5	5.7	69.0	78.7	72.5	79.1	
USA	24.3	59.5	67.8	99.6	118.3	110.6	116.3	120.5

(1) Switzerland 1987, 1992

Source: OECD Institutional Investors Statistics, table S2 (left of bold line); OECD Global Pensions Statistics (columns right of bold line). The figures right of bold line include autonomous pension funds, book reserves, pension insurance contracts and other pensions.

The considerable capital accumulation was a fundamental basis for the spectacular rise of direct international investments in the 1980s. However, liberalization of trade and foreign direct investments were decisive for a further expansion of world trade and internationalization of capital, which in turn promoted financial accumulation and centralization of capital. These processes together formed the initial basis of financial accumulation, from which the financial investors draw their strength (Chesnais 1997: 60ff; 2004b: 19ff). Thus, financial capital – the form of capital that valorizes as financial placements and lives from the division of profits in a company – has exerted itself as the dominant faction of capital in the sense that it can determine the forms and rhythms of accumulation. In contrast to the era before World War I, analyzed by Hilferding (1910), the current resurgence of financial capital has not been carried out through the mutual penetration of large banks and industrial corporations. Today it is the institutional investors, such as mutual and pension funds or insurances (e.g. in France), which control and govern the capital masses (Chesnais 2004a; 2004b).

2.2 The importance of rents in the finance-dominated accumulation regime

A key characteristic of the finance-dominated accumulation regime is the increased importance of the shortened capital circulation – from money to more money (M – M') – of rent-based income for property owners, and of rents as a means of value capture. Ricardo and Marx developed their rent theories based on monopolistic land property. "Rent is that portion of the produce of the earth which is paid to the landlord for the use of the original and indestructible powers of the soil" (Ricardo 1817: 67). The differential rent "is always the difference between the produce obtained by the employment of two equal quantities of capital and labour" (p. 71). Ricardo explains the value of a rent as the amount of labor which is saved by cultivating a more fertile piece of land compared to a less fertile one. "Rent invariably proceeds from the employment of an additional quantity of labour with a proportionally less return" (p. 72).

The dynamics of capitalism reveal that rent-like revenues do not only arise from the monopoly of land property, but also from other monopolistic property forms. Already Ricardo recognized that rents could be extracted from other scarce natural resources. "If air, water, the elasticity of steam and the pressure of the atmosphere were of various qualities; if they could be appropriated, and each quality existed only in moderate abundance, they, as well as the land, would afford a rent, as the successive qualities were brought into use" (Ricardo 1817: 75). The shortage of air by emission certificates and of information by patents confirms this statement. Generally, a rent can be defined as an income which is enforced by the owner of a property title, even if he/she stands outside production.

In Marxian terms, the concept of rent is closely linked to the concept of surplus profit. Achieving surplus profits, thus above-average profits, is a central motivating force for firms in capitalist competition (Mandel 1975: chapter 3). In general, capital strives for any kind of monopoly in its search for sources of surplus profits, regardless of whether organizationally, territorially or spatially defined (Harvey 2006: 99). However, such surplus profits usually exist only temporarily and become settled by inflow of new capital into the sector promising above average profits (Mandel 1991: 257ff). But rents are more than just a special form of surplus profits, because they emerge under specific institutional conditions of monopolistic property rights. These ensure that rent yields do not erode like surplus profits. They can instead be stabilized over years or even decades. Thus, property rights combined with political and economic power permit monopolistic owners a long-persisting appropriation of rents. Consequently, these rents are not additional values, but arise from the division of the surplus value produced by the workers and appropriated by the firms.

Marx generalized: "Landed property presupposes that certain persons enjoy the monopoly of disposing of particular portions of the globe as exclusive spheres of their private will to the exclusion of all others" (Marx 1981: 752). In exactly the same way, intellectual property titles convey a monopoly over immaterial but "particular portions of the globe" (Zeller 2008c). Marx differentiated monopoly, absolute rent and two forms of differential rents (for a typology of rents see also Zeller 2008c).

Keynes defined the rentier as "the functionless investor", who generates income based on his ownership of capital (Keynes 1936: ch. 24). However, an active understanding of the rentier better reflects financialization as a process actively pushed forward by rentiers as active agents (Epstein/Jayadev 2005: 49). Robinson makes the conceptually important distinction between financial placements and investments. Placement means the purchase of titles to debts or shares, which is financed either from savings, from income or from the proceeds of selling other property. In contrast, investment designates using financial resources for creating capital goods (Robinson 1956: 8). This clarification helps to grasp the nature and effects of different capital transfers such as credits, investments and portfolio investments. Interests and rents have large similarities. Quoting Robinson, we can designate the position of financial investors as that of rentiers. In this sense, rentiers are owners of placements. Rentiers are "capitalists in their aspect as owners of wealth, as opposed to their aspect as entrepreneurs. We include in the incomes of rentiers dividends as well as payments of interest...." (Robinson 1956: 247). Whereas interest is a contractual payment for the loan of finance, rent is a contractual payment for the hire of land and buildings (Robinson 1956: 13) as well as of intellectual property (Zeller 2008c). Just as rent is a payment to the land owner for the right to use land with all its resources and buildings, so royalty payments to the owner of the property title convey the right to use the technology and information enclosed, therefore monopolized by the patent, to the licensee. "The price of land is nothing but capitalized and thus anticipated rent" (Marx 1981: 944). Following Robinson (1956), we can consider interest as a financial rent to which the property title of a security conveys the right.

Financial placement capital valorizes and grows as interest- and rent-bearing capital skimming off a part of the profit (Marx 1863: 462). The distinction between profit and interest means that money owners stand outside the production process. "*Qualitatively speaking, interest is surplus-value yielded by the mere ownership of capital; it is yielded by capital as such, even though its owner remains outside the reproduction process. Hence it is surplus-value realised by capital outside of its process. Quantitatively speaking, that portion of profit which forms interest does not seem to be related to industrial or commercial capital as such, but to money-capital, and the rate of this portion of surplus-value, the rate of interest, reinforces this relation.*" (Marx 1981: 500) As a creditor and as an owner of property titles of a firm, the capital owner adopts a position outside the production process and insists to be remunerated with a portion of the surplus value. These proceeds take the form of interests or dividends and are geared to interest rates on the money market or the shareholder expectations and not to the really realized profits. Thus, from the perspective of the money owner the shortened capital cycle arises. The point is to make more money out of money. In the movement M – M’ money corresponds to capital for its own multiplication (Harvey 1982: 255ff). Based on Marx’ (1981: ch 25) explanations Harvey and Chesnais (2006a: 82ff) reconstruct the importance of fictitious capital in the form of circulating and tradable property titles (such as certificates of debts, bonds and shares) which are duplicates of real capital or claims upon future income, as a means to overcome barriers fixed capital creates to future accumulation. The rise of concentrated placement capital in the last three decades resulted in an extended accumulation of property titles or “financial products” which appear to their holders as being their capital whereas they are claims upon future profits from production. Chesnais (2006a) argues that in the current regime of capitalism the requirements of insatiable fictitious capital and its continuous creation even determine the rhythm of accumulation. The lever of shareholder value is used to reconfigure entire production processes what also results in a new global geography of production characterized by new industrial spaces in Asia (see section 3.6).

In the sense of Robinson, both credits as loan capital and stocks as equity capital can be instruments for capturing and centralizing rentier income flows. Credit assumes a double role. As long as credits flow into production, the sums from financial centralization serve the “normal” accumulation of capital. But the constitution of money capital as an “autonomous sort of capital” (Marx 1894 56: 390) makes it possible for financial centralization to serve operations which hardly aim toward accumulation, but rather toward creating conditions of appropriation outside production. Included in this are massive appropriations, which, as in the case of credits to poor and peripheral countries, can be described as predatory. The debt service relies on capture of surplus value and surplus labor in all their capitalist and pre-capitalistic forms. Forced debt service, moreover, is an instrument of political and economical dominance which can lead to processes of de-industrialization, as was the case in Argentina in the 1990s, or even re-colonization. The credit system and debt servitude reduces entire populations and countries to a condition of continual debt service paid by their labor (Harvey 2003: 147). As credits, dividends also increasingly became an instrument for capturing produced values, transferring and accumulating them. The financial markets became the central arena of this process. Shareholder value-driven corporate governance became a lever for dividing profits in favor of the shareholders (see section 3.2).

The surplus value is divided into profit and rent. In turn, profit is divided into interest and enterprise profit (Marx 1981: 498ff, 567f). The increased share of rents and interests induces a stronger exploitation of labor through an increase of the surplus-value rate. At the same time, due to over-accumulation and related problems of valorization in the framework of “normal” accumulation, and because of the division of profits in favor of placement capital, capital reinforces forms of original accumulation (Marx 1976: 873ff) (see fig. 1).

More concretely, we see that due to its power, financial capital in the form of investment and pension funds can acquire an increasing portion of profits as revenue from placements on stock markets, rents and ground rents as well as from public debt service. These interest- and rent-based incomes are only legitimized by possessed fortunes, even if the owner stands outside the reproduction process (Marx 1981: 500). Thus, this financial capital valorizes and grows as interest- and rent-bearing capital by absorbing a part of the profit (Marx 1863: 462). This, however, requires an increase of surplus-value rate and a sufficient accumulation of productive capital (Chesnais 2004b: 31).

Rent was a subject in economic geography in the 1980s and early 1990s. Harvey reconstructed Marx's rent theory and applied it for understanding geographical urbanization (Harvey 1982). Later, Sheppard and Barnes used a broadened perspective of rent theory for understanding exploitation of natural resources (Sheppard, et al. 1990: 104-136). Jäger distinguished different types of rents to analyze urban development (Jäger 2003). Nevertheless, besides a few contributions, the concept of rent was almost abandoned despite its long tradition in economic geography and regional economics. These efforts should be taken up again. The finance-dominated accumulation regime has massively extended rent-based incomes. Thus, the analytical instrument of rents should be renewed and extended in the context of the contemporary economic configurations, institutional conditions and rise of firm networks.

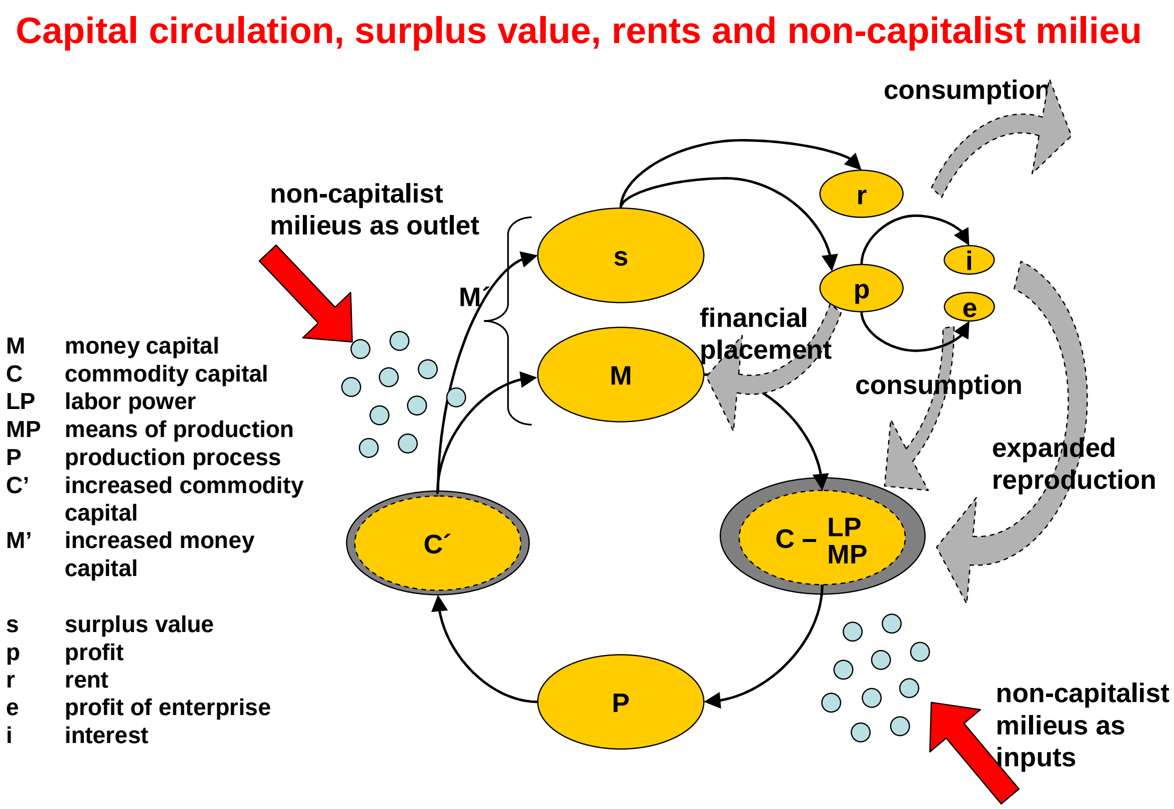

Fig. 1: Capital circulation, surplus value, rents and non-capitalist milieu

2.3 New phase of capitalism

The new macroeconomic and societal structures, especially the increased economic role of the forced savings of future pension recipients, altogether lead to a new configuration of capitalism. Looking for a new, stable capitalist configuration, Aglietta (2000) called this a patrimonial growth regime, and Boyer (2000) asked whether a finance-led growth-regime had emerged. In view of the development of the last two decades, it is more likely that this configuration will remain unstable. The current power relations are better expressed by the notion of a finance-dominated accumulation regime. Originating in the U.S., it deploys its effects worldwide (Chesnais 1997; 2004a).[1]

The increased centralization and concentration of capital as well as the sharpened polarization of wealth are worldwide processes. Finance-dominated globalization has strengthened property rights everywhere and has intensified appropriation mechanisms, which are based on the exploitation of labor and the extraction of rent income. Transnational companies, banks and primarily investment funds have considerably extended their freedom to circulate capital in their own interests. They continually find new possibilities of acquiring riches and resources localized outside the metropolis countries (Chesnais 2006b: 35f).

Due to the general pressure on wages and new forms of labor organization, this new phase of capitalism is characterized by an increase in the profit rate, as compared to the situation in 1970s. But because of restricted markets and the problem of over-accumulation, these higher profits have not caused a heavy increase of investments, consequently of the rate of accumulation (Husson 2006). The institutions of financial capital channel a portion of surplus value into the financial sphere, where it is supposed to provide a particularly high yield (Chesnais 2004b; 2006b: 37; Duménil/Lévy 2004c; Epstein/Jayadev 2005; Stockhammer 2004; 2005). The rentiers consuming a part of the surplus value generate a specific demand (primarily for luxury goods). In the course of these changes, the wage relation considered central by the regulation approach has clearly moved towards flexibility in conjunction with high unemployment (Husson 2004).

In keeping with Chesnais (1999), I interpret the finance-dominated accumulation regime in the context of the globalization of capital both as an expression as well as a specific phase of imperialism, understood as the internal and international dominance of financial capital. The notion of “phase” is not to be understood deterministically in the sense of a necessary step. The concrete configuration rather depends on political power relations and struggles. In view of the U.S.’s strength in the area of finance and its unique military power, other powers have largely been forced to subordinate themselves to the rules of the game. The global financial system is strongly hierarchized. The U.S. has dominated other states based on the crucial position of the US dollar and the dimension of the bond and stock markets (Chesnais 2004b: 25). The course of negotiations for the transformation of the GATT into the WTO and the subsequent world trade rounds cannot be understood without abstracting from this constellation. However, integration into this regime of financial globalization is incomplete. National and regional path-dependent, institutional specificities and power relations influence

[1] Chesnais (1997) was the first who used the notion of “regime d’accumulation à dominante financière”. Pursuing a post-Keynesian perspective Stockhammer (2007) also adopted the notion of finance-dominated accumulation regime and characterized its most important macro-economic features.

how financial capital exerts its power in single countries and regions (see section 3.1). Despite the fact that regions, countries and groups of countries display their own characteristics, relations and developmental paths, they can only be understood in their entirety on a global scale, with internal differentiations with respect to this entirety. More than ever, the globalization of capital requires viewing the world economy not just as the sum of its national entities, but rather in its entirety, affected by an international division of labor and the world market.

Originating in the United States, the finance-dominated accumulation regime unfolds its effects on a global scale. The interactive reasons for this include the liberalization and deregulation of trade, investments, currency transactions and capital flows; the effects of information and communication technologies which enable international *real time* management; and the central roles of the IMF, the World Bank and the WTO. In fact, the world economy is characterized by a very strong hierarchization and differentiation between countries. The actual configuration depends on political power relations and conflicts (Duménil/Lévy 2004b).

The securitization of bonds in liberalized and deregulated markets, a rise of the dollar exchange rate between 1980 and ‘83, and the fixing of interest rates by the bond market enabled the U.S. to quickly attract the liquid resources of the world. In doing so, the U.S. was able to acquire a dominant position in global financial markets. After the Plaza treaty in 1985, which accepted the devaluation of the US dollar against European currencies and mostly against the yen, the U.S. managed to increase its exports considerably. The recession of 1991-92 stopped this period of growth. Subsequently, the U.S. could use its dominant position in the world system to practice a monetary policy in the interest of the banks' liquidity and of low interest rates. Other countries did not have such a financial scope at their disposal. The special role of the US dollar in global finance and trade systems releases the US from permanently rethinking the credibility of their currency. Therefore, the significant growth of the U.S. economy during the so-called *new economy period* from 1992 to 2000 cannot be viewed independently of the U.S.'s position in relation to other economically powerful countries (Brenner 2002).

Without this development, it would have been hardly possible for the U.S. to successfully fight for competitiveness and technological superiority against Japan and Europe. The U.S. could only afford its enormous consumption and balance of trade deficit due to vast capital inflows from Europe and Japan, and, after the Asia crisis 1997, also from Southeast Asia and primarily China (Brenner 2002: 206ff; Duménil/Lévy 2004b:81ff). In other words, the *new economy* and bubbles at the stock and real estate markets in the U.S. were largely based on foreign capital. This capital enhanced the U.S.'s ability to strengthen its science and technology bases (Chesnais 2004b). At the same time, some industry sectors were able to reconstitute their competitiveness for a certain period with specific forms of vertical disintegration, such as *wintelism* (Borrus/Zysman 1997) and new modular production networks (Sturgeon 2002). These forms industrial organization have been accompanied by relocation of manufacturing mandates to South East Asia and China.

The growth of the GDP in the U.S. considerably surpassed that of its rivals in Europe and Japan in the 1990s. During the new economy, the U.S. recorded a considerable increase in productivity (Husson 2004). In addition, a brain drain into the U.S. took place in the 1990s through immigration of skilled professionals (Kogut 2000). Interestingly, most studies on clusters, districts, regional innovation systems and prosperous high tech regions in the U.S. did not consider the importance of international capital inflows. I argue that the rise of high technology sectors, such as biotechnology, and of high-tech regions in the U.S. cannot be explained without considering these capital flows. However, empirical research integrating capital flows at various scales is needed to shed light on such aspects of international interdependences.

Its geo-economic and geo-political power enabled the U.S. to transform itself from the world's largest net exporter of goods and capital to its largest net importer of goods, capital and human abilities. In parallel, the persistent current-account deficits have transformed the U.S. from the world’s most important creditor nation (with a net international investment position of 13 percent of GDP in 1979) to the world’s largest debtor (with a net asset position of –21 percent of GDP in 2004) (World Bank 2007: 29). In this respect, the financial capital concentrated in portfolio investments and investment funds is taking on a special role (see fig. 3) (IMF 2003: 127, 140f; 2006a: 152f). Thus, the U.S. takes the position of a dominating “rentier state”, meaning its accumulation is increasingly based on appropriation of values and resources from outside (Chesnais 1999). The major single characteristic of this imperial order is the capacity of the U.S. to attract investments and financial placements, whereas the country’s savings are negative. Thus, foreigners finance the investments undertaken in the U.S. and indirectly even those undertaken by the U.S. in the rest of the world (Duménil/Lévy 2006: 93). However, the U.S.’s growing capital inflow must be remunerated. Indeed, outflow of financial income has increased. The dependency on foreign assets threatens the preeminence of the U.S. in the long run (Duménil/Lévy 2004a: 672). The key question is, to what extent and for how long will the U.S. be able to finance its triple deficit (trade, budget and households) with capital inflows? The weakening of the US dollar and the burst of the real estate bubble and the resulting credit crunch make that seem difficult (The Economist 2007b).

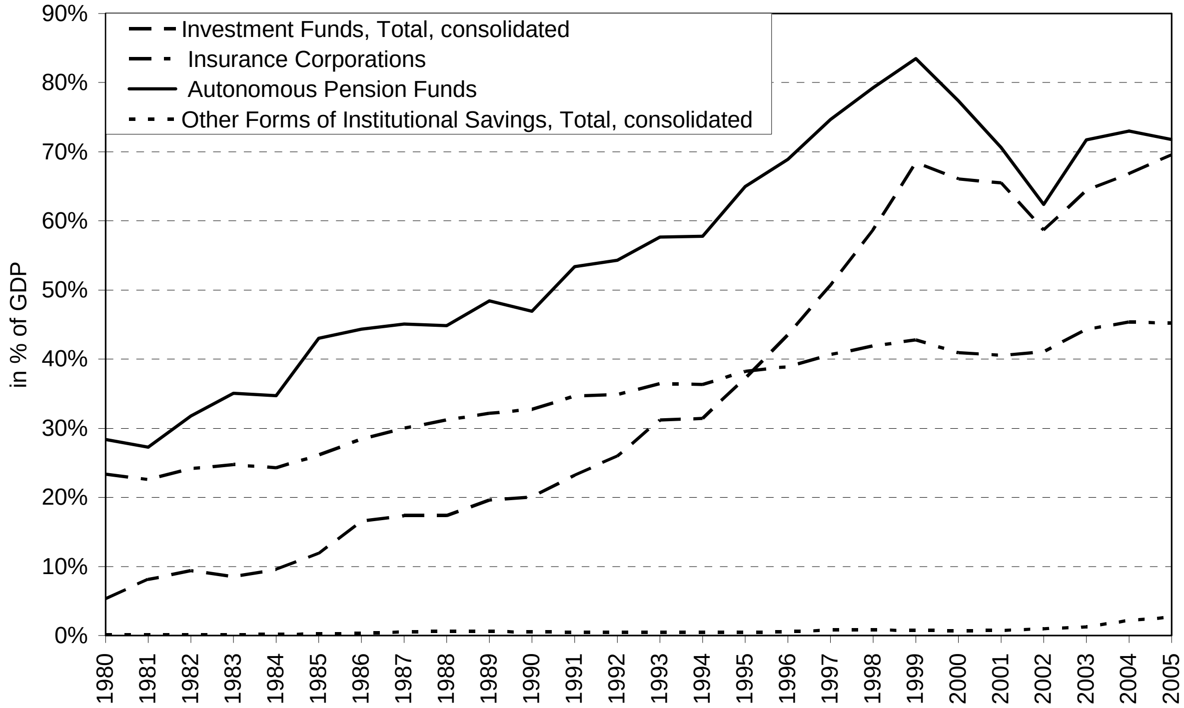

Fig. 2: Financial Assets of Institutional Investors in the U.S. in % of GDP from 1981 to 2005.
Source: extracted from OECD.Stat: Institutional Investors Assets

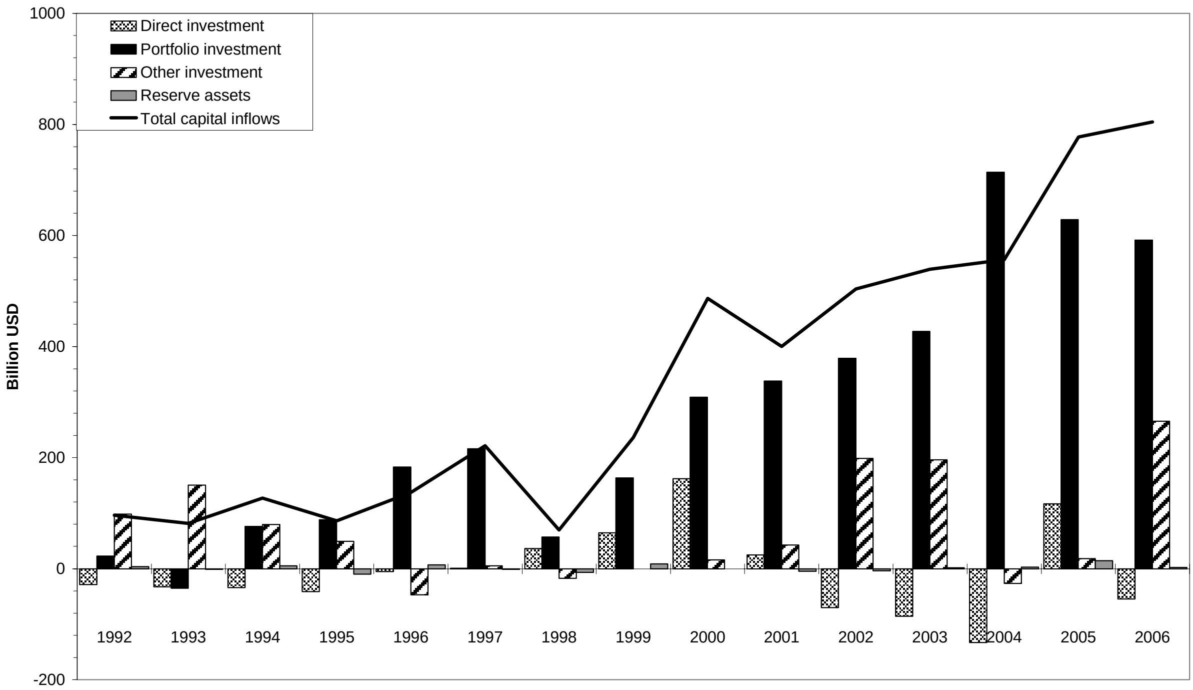

Fig. 3: Net capital inflows to the US 1992–2006.
Source: calculated after IMF data (2003: 140f; 2007a: 136f)

3. Finance, uneven development and economic geography

After having described the emergence of the finance-dominated accumulation regime and the increased importance of value extraction and transfer by means of rents, this section deals with some key relationships in the new regime, all of which serve to transfer and capture resources through rents. I particularly emphasize income distribution; market regime and industrial organization; innovation processes and technological evolution; the relations between capitalist and non-capitalist sectors within a broader tendency towards accumulation by dispossession; and characteristics of uneven development. These five relationships are interdependent and cannot strictly be separated. They are structured by the state and other institutions as well as by political and societal power relations on various scales. Important aspects that characterize an accumulation regime, such as labor relations and labor markets, conditions of demand, migration, as well as ideological and discursive representations will not be discussed. This outline of the relationships which serve to extract rents also aims to build bridges to ongoing work and debates in economic geography and related fields.

3.1 Reconfiguration of state power, hierarchies and institutional complementarities

Financial capital first restored its power in the USA and in the UK. This process started in the late 1970s and steadily attained increasing global impact. In most countries, a combination of international and domestic factors contributed to the expansion of the finance-dominated accumulation regime.

International power hierarchies consisting of power relations between states as well as of international organizations and trade agreements represent international factors. International organizations such as the IMF, WB and WTO were decisive in changing the rules of game on an international scale (Peet 2003). The NAFTA agreement was crucial for liberalization of trade in North America. Such trade agreements represent a neoliberal rescaling of governance to escape national-scale constraints. For example, the NAFTA agreement has made implementation of environmental regulations which can be seen as ‘barriers to trade’ difficult (McCarthy 2004: 330f). The creation of the WTO introduced a new element, in that this organization also has the force of control and sanction. A state taking protectionist measures can therefore be sanctioned. These changes have enormous consequences and limit a nation’s room to maneuver. For instance, the new WTO regime of intellectual and industrial property rights, which was enforced by the USA and the G7 states during the Uruguay round, no longer tolerates protectionist measures for young industries in industrializing and emerging countries. The TRIPS (*Trade Related Aspects of Intellectual Property*) agreement confers additional power to corporations from the G7 states, which have intensively filed applications for patents (May 2000; Coriat 2002; Chesnais/Sauviat 2003). In Europe, the Single European Act of 1986 and the establishment of a financial and monetary policy at the EU level decisively drove financialization and financial deregulation processes, with the free circulation of capital as its main objective. After contradictory debates, the European financial market was opened up to foreign banks and financial institutions established in Europe.

Practically speaking, this meant that US pension funds were given the freedom to operate on the securities market in the EU countries (Coriat 2006: 70f). These international organizations and agreements promoted a re-scaling of state power. This spatial reconfiguration of power is highly hierarchical, providing G8 states and, under their umbrella, the other capitalist core countries far more institutional power than the others. Moreover, the rivalry between transnational corporations as well as between the large imperialist states is moderated by international organizations such as G8, IMF, World Bank and WTO, but also by the security council of the UN. Additionally, increased profit expectations and advancing globalization processes exerted their effects on domestic economies. Exploding foreign direct investments and the emergence of global oligopolistic rivalry in various industries resulted in changed ownership relations and far-reaching industrial restructuring processes (Chesnais 1997). This oligopolistic rivalry, like the rivalry between nation states, is increasingly expressed in a fight for technological leads and tough competition for technology.

However, state policies to execute this rivalry as well as the domestic conditions contributing to the financialization process depend on single countries' histories, their power relations, and the specific institutional path-dependencies of their national industrial and innovation systems. .The specific evolution of financialization in different European countries depends on the role of the stock markets, the banking system, the pension funds and the extent of privatizations (Jeffers 2004). In France, various extensive waves of privatization – the third and most important of which happened between 1998-99, during the government of Lionel Jospin – not only changed ownership relations but also promoted vertical disintegration and financialization of the largest industrial companies (Jeffers 2004; Coriat 2006). In Germany, it was more the dissociation of previously strong financial ties between banks and industrial companies as well as privatizations that pushed financialization and shareholder value concepts (Wójcik 2003). In Switzerland an obligatory pension-fund system had been introduced in 1985. Since then, pension funds have rapidly extended their economic power, concurrently with a banking-system reconfiguration to maintain its importance (Theurillat/Corpataux 2007: 15f; Theurillat/Corpataux/Crevoisier 2007).

Thus, international organizations together with powerful nation states impose rules which improve conditions for extracting values and resources and enable processes of accumulation by dispossession. However, domestic and international factors cannot really be separated. On the one hand, domestic conditions also result from broader international constraints, power relations and discourses. On the other hand, international factors are specifically mediated in single countries and regions depending on the prevailing institutions and power relations.

In most countries, governments either accepted or were forced to retreat substantially from institutional positions which once had enabled them to make investment decisions in accordance with national social, industrial, technological and development policies. These investment decisions, specifically also for R&D, have increasingly come under the direct control of capital. Nation states' reduced capacity to shape their economies is not the result of natural globalization processes, but an intended neoliberal, political goal. However, the strongest national states have maintained key positions. In the US for instance, progress in military technologies and biotechnologies is very much the result of massive financial government support (Zeller 2008b).

Nevertheless, these developments have proceeded contradictorily. On the one hand, the state has been pushed back; on the other hand, it has received new tasks. In some areas, state intervention has even expanded. An absolutely central state task remains the guarantee of property rights, without which capitalist accumulation is not possible. The state has always played a key role in capital's expropriation processes of producers. These not only applies to the so-called phase of "original accumulation" and colonial conquests, but also to ongoing new forms of accumulation by dispossession (see section 3.5). Trade liberalization is based on strong state interventions, too. The privatization of state enterprises corresponds more to their submission under the logic of private capital valorization than to an effective retreat of state regulations. Many areas of the private economy would be inconceivable without government subsidies. The increase of state activities to improve conditions for valorization of mobile capital can be interpreted as a transformation to a national competition state (Hirsch 1995; 1998). The strongest form of state power remains the military machine. In many cases, penetration of other markets and plunder of resources particularly relies on the armed branch of globalization (Serfati 2001; Duménil/Lévy 2003b).

Although the financed-dominated accumulation regime has global reach and subjugates all countries to its logic, the national entity is still crucial with respect to the policy agenda and the institutional change induced by this agenda. For instance, institutional changes concerning financial markets, (intellectual) property rights and management styles, as well as R&D financing mechanisms connected to a shifted role for universities and publicly funded research, shape specific national innovation systems. First in the USA, then in other states, these institutional reconfigurations have condensed into mutual and reinforcing *institutional complementarities,* producing specific variations of finance-dominated capitalism (Amable 2000; Coriat 2002; Orsi 2002; Coriat, et al. 2003: 240). Thus, the pressures and constraints exerted by financial capital and shareholder value are mediated and contested by particular configurations of spatialized social relations, social agency and movements, and socio-institutional contexts over time, across space and in place (Pike 2006: 202). This combination of 'external' pressures and spatially specific, social and institutional configurations can result in hybrid forms of policies, management styles and institutions (Coriat 2006. 95). Depending on national conditions and conventions in industry sectors, the generalization of shareholder value principles influences labor relations in specific ways in different countries (Christopherson 2002). Therefore, although financial capital exerts its power on a global scale, there are still institutional limits to complete,integration of all countries into financial globalization (Chesnais 2004b: 29). National *varieties of finance-dominated capitalism* with distinctive histories and characteristics, such as labor relations and markets, market dynamics, innovation and production systems, industrial performances, financial contexts, regulatory and political conditions continue to exist and influence company behavior (Amable 2000; Christopherson 2002; Pike 2006).

Finally, the shift of state sovereignty to higher authorities such as the EU or even the WTO, does not result in a dismantling of the state, but rather the reorganization of statehood. The EU also needs decisions to be enforced in its member states, and can be described as a kind of proto state. The new emerging state structures are incomplete. Unstable and contradictory combinations of new proto statehood exist on the different scales.

Global competitive pressures and the re-scaling of state power also drastically changed the way regions and cities are governed (Brenner 2004). The increasing entrepreneurialism in urban governance in the context of reinforced competition between regions (Harvey 1989) and the elite's capacities to create regional 'growth coalitions', as well as economic and political restructuring processes are linked with fundamental de- and re-territorialization processes. These are paralleled by a growing number of hidden and undemocratic political and economic agendas at the institutional and political-territorial levels (Swyngedouw 2000a: 551). How financial capital contributes to a reconfiguration of the state and governance of socio-economic issues raises fundamental democratic questions.

3.2 Income distribution structured by concentrated placement capital

The central goal of neoliberalism was to restore class power to the owners of financial capital and to enforce a major redistribution of produced surplus in favor of finance (Duménil/Lévy 2004a: 660; Harvey 2005). The financial markets became the key arena for creating the pattern of income distribution. The prospering of financial capital is based on the value created in production. For almost thirty years, the owners of financial capital have been strengthening the mechanisms of appropriation. All profit producing areas carried an increasingly bigger appeal to monetary capital, including the productive capital fixed in companies. Since the mid-1980s, financial placement capital has increasingly been able to govern investments and the division of incomes. Financial placement capital has become the dominant fraction of capital in the sense that it is able to govern the forms and rhythms of accumulation. Institutional investors largely influence decisions as to what types of investment are made and how returns from investments are distributed, with a view to future investment. The transnational corporations organized as holdings are the nodes of financial nets, whose stitches enable the shareholders and the holders of stock options to acquire a part of the value created by the production of goods and services in the companies which they control directly or indirectly. Even more far-reaching is the fact that institutional investors also stand at the heart of the entire structure of income distribution in contemporary capitalism (Lordon 2000).

The distribution of a society's surplus has various interrelated dimensions (fig 1). The first dimension concerns the distribution between wages and property-based income, respectively between capitalists and workers. The increasing claims of concentrated placement capital almost everywhere contributed to raising the share of capital income at the expense of wages (fig. 4). A further aspect of income distribution between capital and labor concerns the weight and quality of indirect wages, expressed in social infrastructure such as education, healthcare and childcare.

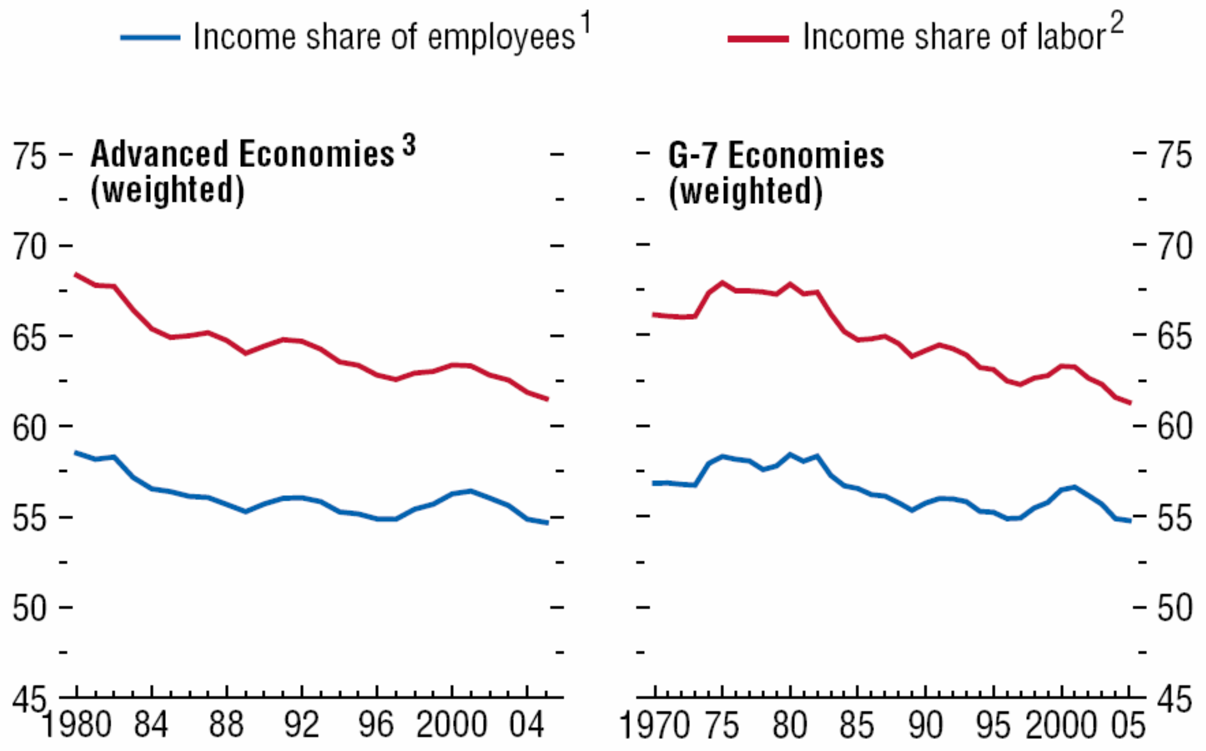

Fig. 4: Labor income shares in % of GDP (IMF 2007b:168)

Beside the direct and indirect division into wages and capital income, there are further mechanisms of income distribution between labor and capital. One relates to the specific configuration of the tax system. The other is the interest payment on public debt, ensuring the transfer of large flows of income (several percentage points of GDP) from tax payers, primarily wage-earners, to bond-holders, primarily large financial investors such as funds and banks.

The second dimension includes the division of surplus value into profits and rents, as well as the division of profits into enterprise profits and interests (including distributed dividends to shareholders). This dimension refers to the division between capitalist and rentiers (Robinson 1956). The stock exchange has become an instrument for the subordination of corporations to management norms and profitability norms requested by the shareholders (Williams 2000). The “impersonal” pressure of the “markets” exerted by comparing bond interest rates to industrial profits can be reinforced through the supervision of industrial corporations. Stock options motivate management members to improve corporate financial performance. Management passes the pressure on to the workers through demands for increased flexibility, intensity and productivity.

Through shareholder value-driven corporate governance, institutional investors exert permanent pressure to increase profitability (often at the expense of wages) and to capture a considerable part of the profits in the form of dividends or realized share prices. When retained profits are downgraded in status to the residual remaining at a firm's disposal after dividend payment, managers are placed in the position of needing to keep wages down and increase labor productivity as the only way of ensuring investment capacity. This mechanism erodes wage share. In this context, maximizing the flexibility of labor is a major objective on the part of managers. The capital-labor relationship has developed in the direction of more flexibility combined with high unemployment or often hidden underemployment (Chesnais 2004a; Sauviat 2004). Thus, the different dimensions of income distribution are narrowly intertwined. Moreover, profits and rents are often symbiotic in practice, and therefore cannot always be clearly distinguished from each other.

Strongly linked with the second is the third dimension, building on the distribution of profit between retained and reinvested profits, and profits distributed to property owners in the form of dividends or rising stock prices. Corporate decisions enhancing "shareholder value" favor the claims of institutional investors. Thus these investors, by using voice or threatening with exit, strongly influence decisions about profit reinvestment in new capital formation or research and development (Lazonick/O'Sullivan 2000; Sablowski/Rupp 2001; Serfati 2003; Duménil/Lévy 2004c; Chesnais 2004b: 23). Therefore, institutional investors strongly shape what O'Sullivan defined as the core questions of resource allocation: "*Who makes investment decisions, what types of investment they make and how the returns from those investments are distributed*" (O'Sullivan 2000: 413).

Indeed, the share of returns reinvested and those placed financially shifted in favor of the latter. Several authors argue that corporate governance favoring shareholders effects a slowing down of accumulation in the U.S. (Duménil/Lévy 2005). Stockhammer confirms these downturn effects of financialization in the U.S. (1963-97) and in France (1970-96). But there was no general downturn in UK (1970-96), where the accumulation rate had been already low during the Golden Age. In Germany (1983-90), financialization had not yet reached a comparable stage (Stockhammer 2004). In general, although profit shares on capital stocks (Stockhammer 2005: 196), respectively profit rates (Husson 2006: 222 ff.), have recovered to levels above those of the Fordist era, the rate of accumulation did not rise substantially.

Different studies show that rentiers' incomes have greatly increased their shares of national income in most OECD countries since the early 1980s. Monetary policy with high real interest rates, financial liberalization and reduction of labor union power favored this development (Power, et al. 2003; Epstein/Jayadev 2005).[2] Empirical analysis of investment behavior of nonfinancial corporations in Argentina, Mexico and Turkey reveals that the real sector channels savings to speculative placements instead of to long-term investment projects.

[2] Epstein and Jayadev (2005: 50) include in their notion of rent those profits earned by firms engaged primarily in financial activities plus interest income realized by all non-financial, non-government resident units. But they do not include dividends from nonfinancial corporations. Because of lack of data they omit capital gains on financial assets.

Thus, also nonfinancial companies can act as rentiers (Demir 2007). In the U.S. the profits from financial placements and speculations represented 27% of the profits of the 500 companies listed in the Standard & Poor index in 2006 (The Economist 2007a: 88).

All three dimensions are strongly influenced by spatially specific power relations, institutional frameworks and path-dependencies. Spatial distribution of wealth can be considered as a fourth dimension and will be discussed in the context of the overall uneven development of capitalism in section 3.6. However, geographical aspects of such income distribution as well as investment and financial placement behavior have only rarely been investigated as aspects of the fundamentally uneven development of capitalism.

3.3 Regime of competition, industrial organization and transfer values

In most OECD countries, institutional investors substantially increased their part in the ownership of companies. Privatizations, shareholder value-driven corporate governance and the securitization of economic activities contributed to the rise of new forms of industrial organization. Large companies have focused on key activities and have unloaded many others. The practice of allocating investments on an inter-divisional basis, with more profitable activities supporting the less profitable ones, was replaced. Now firms must justify their investments on financial markets. Moreover, downsizing has become a standard management tool for meeting shareholders' demands (Coriat 2006: 87ff). Two tendencies characterize the regime of competition and industrial organization: the emergence of global oligopolies and a tendency towards a selective vertical disintegration.

Large corporations profited most from liberalization of trade and direct investment. A global regime of competition emerged, dominated by large corporations with presence in all important markets as producers or as wholesalers with a powerful sales organization. Where liberalization and privatization have broken up former national oligopolies, new global oligopolies have emerged. These relational spaces of rivalry are structured and limited in markets by reciprocal dependent relations which interconnect the small number of large corporations (Caves 1996: 90; Chesnais 1997: 112). The oligopolies increasingly rely on knowledge and technologies (Delapierre 1997; 2000). Hence, firms implement specific appropriation regimes to acquire products, technologies and knowledge. Access to or even control of specific knowledge and technologies allows companies to establish entry barriers against potential competitors and, at least temporarily, to skim technological surplus profits or rents (Zeller 2008c).

Increased profit expectations, shareholders' claims, sharpened international competition and uncertainty pressure firms to externalize risks and to reduce amounts of fixed capital. This favors vertical disintegration, outsourcing and acquisition of externally produced intermediates, components, technologies and knowledge. By subcontracting and creating hierarchical networks, transnational corporations outsource production and thus also investment risk to local companies. These strategies can combine a great variety of transnational activities and interweaving, such as export, subcontracting, supply with intermediates and corporate alliances. New investment forms, such as licensing or subcontracting, offer the possibility of organizing production on new scales without moving much capital over borders. The core companies concentrate on marketing the final products and shift manufacturing to globally operating key suppliers. By creating such modular production networks, core firms profit from external economies of scales (Sturgeon 2002). Many transnational corporations focus on value-added intensive competencies, such as research and development, as well as specialized production lines. They can determine the structure of the complete value chain without direct ownership of less value-added intensive activities, like production of intermediates or mass production (Gereffi, et al. 2005). The enforcement of such hierarchical production organizations and pyramids of suppliers is connected to the creation of specific dependence and power relations in the value creation chains. They permit the core firms to absorb values already produced by other enterprises inexpensively (Smith, et al. 2002).

Rents based on intellectual property monopolies, or exclusive power within the production hierarchy, are key instruments of such appropriation processes. Of course, the subcontractors and supplier firms will try to pass on the pressure they experience to the workers and their household members. In cases of domestic work and other precarious forms of labor, formal and informal labor relations melt together.

The increased mobility of productive capital allows large companies to systematically use wage differentials and different local conditions to throw entire population groups living in different regions into direct competition with each other. They accomplish this either by using their own investments, establishing subcontracting and supplier networks, or merely by threatening to shift activities elsewhere.

These new forms of industrial organization underscore first the centrality of value generation through the labor process and, second, the increased importance of value transfer and appropriation based on power relations and property monopolies. The global production networks (GPN) approach conceptualizes the creation of value within the production process, as well as the enhancement and capture of value, as key categories. Its proponents explicitly name different types of rents as forms of value generation (Henderson, et al. 2002: 448f). However, based on the understanding of classical economists such as Ricardo and Marx, or also Keynes and Robinson presented in section 2, rents do not directly result from the value creation process, but rather represent a part of the surplus value appropriated through property monopolies and/or power. Nevertheless, empirical studies using the Global Commodity Chains (GCC) and GPN framework clearly illustrate the importance of value transfer (Smith, et al. 2002). The GCC and GPN approaches could be enriched by integrating an analysis of the power exerted by financial placement capital through financial-market liquidity and shareholder value-based corporate governance. Putting the analysis of production networks within a broader understanding of the current finance-dominated capitalist configuration and placement capital’s ambition to acquire rent income would considerably enhance our understanding of industrial organization.

Even more than in manufacturing, corporate strategies in service provision are based on collaborations and control relations without a direct equity interest, such as franchising, management contracts, concessions and a variety of hierarchical collaborations with local companies (UNCTAD 2004: 104). The appropriation of enterprises providing basic services like water, electricity and telephone by transnational corporations was a central characteristic of the last two decades' waves of privatizations. For pension funds and mutual funds looking for stable yields, shares of large corporations running privatized, former public services were and are attractive placement outlets. Populations accustomed to the supply of gas, electricity, telephone and water have become sources of safe yields for investors. Formerly public enterprises are all the more attractive placement objects, after the state has funded tax-financed investments in infrastructure. Thus, foreign direct investments serving the acquisition of former state enterprises correspond more to an appropriation than a capital flow for investing in an extension of production.

Flexibilization of production processes, risk reduction by vertical disintegration, cost reduction by de-location of plants and jobs – facilitated by the liberalization and deregulation of foreign direct investment (FDI) and trade, as well as by the changes made in labor legislation – strongly influence the geography of production, innovation and consumption. Thus, shareholder value-driven corporate governance and the institutional investors' time-limited expectations to pocket their returns in various industries weakened corporate ties with regional contexts (Pike 2006). However, the more strategic and knowledge-intensive an operation is, the more it tends to remain located in or shifted to attractive rich regions. In general, the finance-dominated accumulation regime has resulted in a strengthening of already strong regions. The evolution of the biotechnology industry clearly illustrates these findings (Cooke 2004; Zeller 2008b).

3.4 Creativity, innovation and technology as sources of rents

Firms can obtain surplus profits by achieving technological advances. Intellectual property rights, industry standards and brands serve to stabilize such surplus profits and transform them into rents to be skimmed over a long period. Financial placement capital tries to prolong and extend technological monopoly rents by extending property monopolies. Via shareholder value-driven corporate governance it captures a part of such rent income. Already Schumpeter explicitly emphasized the role of finance on both the microeconomic level of entrepreneurial behavior for resource allocation and the macroeconomic level of interaction between structural economic change and resource allocation (O'Sullivan 2004: 242). However, the effects of finance for innovation processes have only rarely been explored, even by Neoschumpeterian economists. Perez (2002) is one of the few authors who combines macro- and microeconomic perspectives and interprets innovation dynamics and its financing within a broader historical context. Remarkably, most works on national, regional and sectoral innovation systems have not taken into account the steering power of financial capital or the broader societal and economic change of accumulation conditions (cf. Lundvall 1992;

Nelson/Rosenberg 1993; Mowery/Rosenberg 1993; Freeman 1995; Howells 1999; Cooke 2001; Malerba 2002).

With the rise of a finance-dominated accumulation regime, financial capital has come to play a crucial role in controlling investments relevant to innovation (Chesnais/Sauviat 2003). Two aspects of the relationship between innovation and finance will be considered: first, the efforts to enclose socially produced knowledge by creating and extending intellectual property monopolies, and second, the change of financing innovation-related investments and its effects.

Innovative activities and technology production in general are based on a far-reaching social division of labor; thus they are socialized processes. Knowledge, information and technologies have become key economic sources and central axes of an accumulation strategy which relies on the massive expansion of intellectual property monopolies. In principle, the valorization of knowledge is not new in capitalism. But what's distinctive to the finance-dominated accumulation regime is the highly increased importance of monopolized knowledge and information in the form of patents for the extraction of rents.

The private appropriation of knowledge raises even more far-reaching questions than the private appropriation of material-goods production. Knowledge production and its valorization exhibit some characteristics crucial to the transformation of the property rights regime (Jessop 2000; May 2000; Husson 2001: 128; Serfati 2004: 56). First, intellectual activity enables considerable cumulative effects which bear much larger consequences than the productivity gains realized in material production. The benefits of science and information increase according to the number of people who use it. These cumulative effects arise because codified information and knowledge can circulate extremely easily. They result from the collective and open character of intellectual activity. Second, the production of scientific knowledge and of numerous new technologies requires very extensive, concentrated investments, similar to investments in fixed capital. The valorization, however, can often be organized with only marginal additional costs. Knowledge-relevant information can be multiplied and used without large costs. For these reasons, firms seek to limit the uncontrolled diffusion of their products and artificially create scarcity. Intellectual property rights are designed to render this artificial scarcity legitimate in the realm of knowledge and to exclude others from its use or force them to pay royalties (May 1998: 69-70; Sell/May 2001: 472). Intellectual property is a power instrument and contributes to a further accumulation of power.

The increasing monopolization of intellectual property has provided firms with new avenues for extracting rents and designing corresponding competitive strategies. Intellectual property monopolies (patents, brands, author-rights) have become a central assessment criterion for financial valuation of knowledge-based firms and even for academic research institutions. As the possession of property monopolies forms a source of income in the form of rents, its multiplication becomes a high priority. The hunt for intellectual property monopolies leads to a complex landscape of property rights and to cascades of royalties. Intellectual property rights can even become independent, and thus a pure financial placement and subject of financial speculation. This again reflects the increased significance of financial capital seeking lucrative placements.

The attractiveness of intellectual property for investments makes it susceptible to surplus capital. The more surplus capital resulting in over-accumulation is available, the more likely it is that monopolized intellectual property will be absorbed into the framework of capital circulation in general (Harvey 1982: 348; Zeller 2008c). Indeed, in the course of financial globalization, the mix of innovation-oriented modes of financing has changed radically. The shift from public to private financing and the shift from managerial to market control brought along substantial changes in the size, aims, priorities and planning intervals of innovation-oriented investments. The significance of the funding of innovation-relevant investments through retained profits and public research expenditures has decreased, whereas financing over capital markets has gained importance (Lazonick/O'Sullivan 2000: 18). Large companies with a decent reputation can issue bonds on international bond markets to finance their innovation-oriented activities. The liquidity of the secondary markets makes these bonds very attractive for institutional investors (Chesnais/Sauviat 2003). Institutional changes contributed to the emergence of a venture capital market which partially replaced traditional mechanisms. The venture capital boom itself arose in a specific historical context of societal relations in the U.S. (Florida/Samber 1999; Zeller 2008b). Its rise in the U.S. needs to be seen as a process closely linked to the emergence of a finance-dominated accumulation regime.

Despite financial globalization, however (as explained in section 3.1), national differences have not vanished at all. The size and stability of long-term investment financing, trainings and R&D in a country, and the duration of planning intervals still depend on the multitude and the mix of sources for financing. The way public and private R&D and education expenditures are split as well as the mix of in-house and capital-market financing are relevant. These differences do not entirely depend on the configuration of financial systems. They also depend on countries' and regions' integration in the international division of labor and how much political scope a country has.

Financialization of innovative activities provokes several societal problems and challenges for further research. They underscore how important it is to embed national, regional and sectoral analyses of innovation systems in a broader framework of societal and institutional change. First, the institutional changes which have led to a new regime of intellectual property rights promote the transformation of knowledge into a commodity. Research processes become a direct focus of financial investment strategies. In many industries there is a contradiction between the long-term horizons of research and development on the one hand, and the short- or mid-term expectations for returns from financial placements on the other hand. Research and development activities increasingly depend on the “mood” of the financial markets. Priorities have been shifted away from basic research and directed instead toward application possibilities. Financial resources flow first toward any technology or product whose applicability can be expected in a limited period and whose high profits can be promised (Kenney 2000; Pisano 2006). Financial concentration and a focused allotment of financial resources to certain industries reinforce spatial concentration of innovative activities in a few regional arenas (Zeller 2008b).

Second, the increasing enclosure and privatization of socially produced knowledge limits accessibility to this knowledge and the openness of technological developments. Different authors emphasize that basic research, because of its cumulative character, should be organized as independently as possible from corporate interventions and the influential control of financial investors (Argyres/Liebeskind 1998; Foray 2002; Chesnais/Sauviat 2003). Private firms do not finance the same kind of basic research that was given up by the public sector (Dasgupta/David 1994; Foray 2002: 76). The question that arises is, how have innovation processes and technological trajectories changed due to finance-dominated institutional configurations? If the open nature of the *republic of science* (Nelson 2004) is to be taken seriously, the question to be raised is, how can space be expanded for the democratic formation of technological development?

The third challenge refers to the longer cycles of industrial evolution. Perez' (2002) argues that the crash of the new economy cycle in 2000 and 2001 marked the end of the installation period and a fifth great surge, accompanied by a specific techno-economic paradigm. In this time of "institutional imagination", she argues, a diffusion of new technologies in society and synergistic growth on regional, national as well as global levels depend on favorable institutional changes (Perez 2002: 167). What's pertinent here is the question of what kind of industrial organization would enable sustainable growth and permit large parts of the population to profit from the new insights and products of the industry.

3.5 Extension of accumulation by dispossession and extraction of rents

Through its demands for increasing profitability, financial capital strives to extract more value from society. This is not only manifested in a reduction of real wages, work intensification, deregulation of labor, attacks on social achievements, privatization and appropriation of public services by transnational corporations, but also in a variety of dispossession mechanisms and in imperialistic and martial appropriation of territories and their resources (Chesnais 2004b: 43). The submission of additional social spheres to capitalist valorization processes plays a crucial role. These processes refer to the actuality and permanence of „original accumulation" processes (Harvey 2003). Harvey's actualization of Marx's concept of "original accumulation" has also motivated geographers to contribute to a more adequate understanding of current forms of accumulation by dispossession and 'extra-economic' means (for an overview see Glassman 2006).

Numerous processes of dispossession determined the emergence of capitalism (Marx 1976: chapter 24). Discussion of the permanence of accumulation forms in relation to the expansion of capitalist property and production relations to countries (or sectors) and social activities not yet or only partly submitted to such conditions is not new. Luxemburg (1913: 397) impressively pointed out capital's permanent need to engage a metabolism with non-capitalist sectors and to violently accumulate at the expense of non-capitalist production forms. In this sense, accumulation designates the spatial and social expansion of commodity relations and capitalist property relations. Thus, original accumulation is not to be understood as a historical phase, but as a permanent characteristic of capital (Mandel 1975: 46). The temporal sequence is not only a historical but a permanent one. Capital continuously separates the producers from their means of production and expands this procedure. This separation of the producers from their means of production is a common characteristic of the "normal" and original accumulation, although conditions for enforcing this separation differ. Therefore, capitalism cannot be understood as a closed system. Capital rather always colonizes new areas. The expropriation of rural producers testifies to this, as does the enclosure of socially produced knowledge (*knowledge commons*) (De Angelis 2004: 63f, 69, 81). Thus, original accumulation corresponds to a structural relationship between capitalist and non-capitalist modes of production and life which, driven by the valorization process of capital, consistently configures itself into new forms (Alnasseri 2003). I differentiate three forms of accumulation by dispossession (cf. Chesnais 2003: 174; Harvey 2003: 145ff):

The separation of producers from their means of production and enclosures and the enforcement of new property rights both, in the sense of original accumulation, correspond to the first form of accumulation by dispossession. Processes of original accumulation, including the continuous destruction of rural subsistence economies in Africa, Asia and Latin America, or the rapid proletarization of the population in China (Webber 2007) plunge millions of people in different parts of the world into misery. Even slavery continues to exist, particularly in the case of female sex trafficking (Harvey 2003: 149).

In view of unsatisfactory possibilities for valorization, capital is seeking new fields for investment and placement. These new fields are sources of regular revenues in the form of rents. The capitalization of nature and of scientific knowledge has become a central characteristic of today's capitalism under the dominance of financial capital. A current form of dispossessing accumulation is the creation of new enclosures via the extension of intellectual property monopolies. This includes the commodification, control and appropriation of natural resources (such as biologic substances, genetic material, water and air), of scientific and technologic knowledge, of cultural and intellectual creativity, as well as of cultures and historical inheritance (Chesnais/Serfati 2004). Thus, looking for new fields of valorization, capital dispossesses different agents, such as researchers, workers and also rural communities, from the products of their labor, from their work instruments and from the knowledge and information they generate collectively. In response to the increasing socialization of labor, in particular of innovative activities, capital even seeks to increase control over human relations wherever there is knowledge or creative potential to be gained (see section 3.4). Property monopolies in the form of patents are a key instrument for enclosing socially produced knowledge, cultural and intellectual creativity (May 2000).

Natural resources are a field of increasing importance for rent-seeking capital. The commodification, control, and appropriation of natural resources, such as raw materials, drinking water and air (e.g. through tradable emission certificates) are current key processes of capital expansion into new fields. Banks and institutional investors have developed a broad range of securities (e.g. certificates) for attracting money to be placed in enterprises doing business in raw materials, energies and water. The present increase in many commodity prices and the geopolitical strategies to control the raw material sources underline the growing importance of this sector. The enforcement of property rights over the resources and, if necessary, direct military control of the regions in question are decisive prerequisites for corporate strategies of rent capture.

A growing body of literature explores how nature is increasingly commodified under different neoliberal policies (Castree 2003; 2008). Although commodification processes are characterized as a key element in the processes of nature's valorization , value extraction, value transfer and value appropriation have never been intensively investigated. Castree asks why "nature is being neoliberalized?" without linking his answer to the question of how today's capitalism works (Castree 2008: 5). I argue that the answer must be found by investigating capital's sharpened need to enclose and dispossess new fields for accumulation. In the context of finance-dominated accumulation, the promulgation of property monopolies is decisive in advancing this commodification of nature. The extension of the value-creation process and the redistribution of values through rent extraction is based on property monopolies, and allows new possibilities of accumulation by extended reproduction and by dispossession. Relatedly, Sheppard and Barnes (1990) applied rent theory to monopolistic ownership of natural resources. This effort could again be picked up. Moreover, current financialization pushes forward the securitization of property rights such as patents, real state properties, exploitation rights and CO_2 emission certificates. Banks and financial institutes can split up property rights, regroup them and transform them into all kinds of tradable securities. This technique increases liquidity and again opens new possibilities for purely financial accumulation strategies (Coriat 2006: 82).

The second form of dispossessing accumulation is represented in the expansion of capitalist property into new areas, such as colonial appropriation and privatization of public services and infrastructures, of pension systems and social security, as well as the transformation of universities into institutions which cost-effectively offer capital access to knowledge and ability. Since the beginning of the neo-conservative counter-reform almost thirty years ago, capital has tried to appropriate the entire material and intellectual conditions of the production process, thus the historical body of work of the social activity of mankind. Everything that appears profitable is to be valorized and transformed into a commodity.

The third form of dispossessing accumulation takes place by means of financially, organizationally or institutionally stronger accumulation centers which appropriate, absorb and centralize parts of the value and surplus value produced through other forms of social organization. Moreover, capital has developed real predatory mechanisms. These include mergers and acquisitions, which due to unequal monopolistic and oligopolistic power relations and speculative aspects often are accompanied by robbery of assets; predatory practices between different factions of capital, such as coercive measures, criminal activities and falsifications; and the values skimmed off at the expense of other capitalist companies via extremely unequal subcontracting relations, unequal research collaborations or so-called network companies (Chesnais 2003: 174). As we have seen in section 2, the international credit system can also be instrumental for this third type of accumulation by dispossession. Based on his/her property title, the creditor takes the role of a rentier capturing values from the debtor. Thus, accumulation can happen in certain parts of the system at the expense of other parts on the basis of specific power and property relations (cf. Marx 1867: 790).

The different processes of dispossession are often closely linked together, and therefore are not always sharply separable in practice. They have an *extensive* (geographical) and an *intensive* (social) frontier (Glassman 2006: 622). The first and second forms of dispossession (separation from means of production and expansion of capitalist property relations) can appear closely interrelated. The valorization based on these processes can take place through wage labor or through the extraction of interests and rents, which for their part are based again on the redistribution of acquired surplus labor. Moreover, dispossession processes of the third form, between different capital groups or countries, in the end rely on previous appropriations of surplus value and natural resources of the first and second form. An analysis of current developments in the pharmaceutical and biotechnology industries demonstrates how the various dispossession processes interlock, such as the enclosure of knowledge, the privatization of publicly funded research results, and the extraction and centralization of parts of value and surplus value produced by public research organizations or other companies (Zeller 2008c). The challenge is to grasp how the different processes of dispossession and valorization interlock temporally and spatially, how they mutually perpetuate themselves, and to what extent they have become central forms of exploitation and resource transference in the current accumulation regime.

Enclosures are not only a permanent characteristic of capital logic, they also have a central role in current political confrontations; while capital seeks to incorporate new areas, resistance arises from population segments who want to maintain their influence over these areas. The social space created by accumulation through enclosures is permanently contested (De Angelis 2004: 60, 72; Glassman 2006: 622).

The mechanisms of the original accumulation are a substantial trait of the “new imperialism” (Harvey 2003). With its intensified return to forms of original and dispossessing accumulation processes, the current phase of imperialism can be characterized as a global economy of dispossession. The imperialistic countries enforce value transfers from the peripheral countries through different channels, based on expropriation procedures which include the direct plundering of natural and human resources, debt service, financial rents and royalty payments (see section 3.6). Harvey demonstrated how different forms of accumulation by dispossession shape the uneven development of capitalism. He mentions that the search for monopoly rents on a part of capital creates a premium on the commodification of all kinds of sources, including collective or individual creativity (Harvey 2006: 92). I argue that in finance-dominated capitalism, the search for rents is a key strategy for appropriating resources. Dispossession processes and the extension of property monopolies are prerequisites which enable further expanded reproduction and extraction of rents. However, further research is required to understand how these processes – in such varying fields as natural resources, collective cultural community heritage, innovative and creative worker and research activities – are linked to permanent production and reproduction of uneven development and to the capture and transfer of values and resources. Recent contributions encourage the advance of this orientation (Glassman 2006).

3.6 Uneven development and hierarchies of resource flows

Capital constantly produces and reproduces uneven development in space and time. The dimensions of income distribution, the forms of industrial organization, technological development and the processes of dispossession described above are closely intertwined with uneven development on all geographical scales.

Besides technological advances and market monopolies, geographical unevenness is a key condition for achieving surplus profits. Surplus profits induce a value flow from less productive countries, regions, sectors and companies to more productive ones when commodities are traded. Thus accumulation of capital produces development and underdevelopment as mutually conditioning moments of uneven and combined capital movements (Mandel 1975). These processes have maintained their importance and have been intensively discussed since the late 1960s. In the 1970s, lively debates flared up over value transfer resulting from different productivity levels in the context of unequal exchange. Uneven development was also discussed within the tradition of critical political economic geography (Harvey 1982; Smith 1984; Peet/Thrift 1989; Storper/Walker 1989; Veltz 1996). Harvey explains how capital temporarily and spatially fixes its repeated problems of over-accumulation by mobilizing, transferring and fixing capital on new (or renewed) places, and how repeatedly doing so creates new *spatio-temporal fixes* (Harvey 1982: chapter 13, 442ff; 2003). These capital transfers induce new capital flows back to the owners. These returns increasingly take the form of interests and rents. This section presents examples of such financial flow channels and underscores the importance of conceiving the economical and political relations in this period of global capitalism as elements of a totality and with its diverse spatial differentiations (for a more detailed survey see Zeller 2008a).

Already in the early 1990s, discussion on global and world cities revealed that the command over financial flows is highly concentrated spatially in a few nodes, such as New York, London and Tokyo (Sassen 1991). The North Atlantic zone (North America, the EU and the rest of Western Europe) takes a central role in world trade, has the strongest position in direct investments and dominates the area of financial capital. Financial centers and institutions in the U.S. and in Europe, respectively, together concentrate between 60% and 90% of worldwide fund assets, finance derivatives, revenue of investment banks, market capitalization, foreign exchange markets, bond loans, shares and creditor titles as well as bank balances. The financial center of London plays a crucial role within the entire European market for financial services (Clark 2002). Moreover, the U.S. performs with clear superiority within the North Atlantic zone at fund assets, derivatives, revenue of investment banks and market capitalization (Serfati 2006: 75f; World Bank 2007: 88). Managing 5% of the assets in the world, hedge funds realize between a third and a half of the daily transactions combined in New York and London (Aglietta/Berrebi 2007: 106f).

The worldwide assets of funds rose to a record high of 20.9 trillion USD at the end of 2006. 10.4 trillion of this was concentrated in the U.S. and 7.9 trillion in Europe (DWS 2007). The stock of global financial assets reached 140 trillion USD in 2005, according to a study of McKinsey & Co. The United States, the United Kingdom, the Euro zone and Japan accounted for more than 80% of the total. From 2001 to 2005, the U.S. alone absorbed an average of 85% of total global capital flows, or over $500 billion each year, to fund its budget deficit (McKinsey&Company 2007: 7, 17f). The U.S. has been able to consolidate its position in worldwide financial markets since the end of the 1970s.

The rising power of financial capital contributed to the emergence of global cascades of interest and rent flows. Pension funds not only increasingly have internationalized their placements they also intervene in the spatial organization of economies on a national scale. Financial capital penetrates space very selectively. As it concentrates placements in lucrative places, it also excludes other players and spaces from financial channels. This happens on the level of national economies as well as on a global scale. For instance, Swiss pension funds additionally fuel the economic performance of the strong regions, placing their collected money primarily in the profitable key sectors of the economy (Theurillat, et al. 2006; Theurillat/Corpataux/Crevoisiser 2007: 22). Or venture capital funding in U.S. biotechnology tends to strengthen the strongest regions (Zeller 2008b). Thus, finance and command over finance are highly hierarchical, both organizationally and spatially.

Institutional investors centralize huge amounts of money capital and reallocate it according to their profitability expectations and risk-reducing strategies. They are the key agents in these processes of wealth redistribution on a global scale as well as on other scales. The international private financial flows serving to acquire values abroad can be arranged into four different categories: credits from banks or financial organizations, purchase of bonds on the issue markets, direct investments and portfolio investments.

Although the financial flows between the different capitalist core countries largely dominate, according to World Bank figures, the record sum of 571 billion USD net flew to developing countries in 2006 (World Bank 2007: 35). The composition of private capital flows to peripheral and emerging countries strongly shifted to equity participations over the course of the last upswing. On average, direct investments accounted for 57% of private capital flows, compared to portfolio investments (9%) and short- and long-term bank debts combined (33%), from 2002 to 2005. Still, in the mid 1990s, bank debts amounted to 42% (World Bank 2006: 143).

The distension of public debts since the 1970s led to a steady flow of capital to the owners of debt titles in metropolitan countries. The peripheral countries were submitted to a logic that forced them to spend a considerable part of their export revenues and tax income on settling an eternal debt. The entire foreign debt of the developing countries increased to approximately 2,800 billion USD in 2005 (World Bank 2006: 193).

Through the channel of direct investments, foreign firms directly organize the exploitation of local energy resources and raw materials as well as the production of intermediate products and consumer goods in the "recipient countries". The take-over of privatized service firms or local banks financed by direct investments makes it possible to open up lucrative revenue flows on local markets. The U.S. and most metropolitan countries with large transnational companies show a positive balance of income from foreign investments (Duménil/Lévy 2004a: 664; Serfati 2006: 84f; BEA 2007: Tab. F2). The transnational corporations usually centralize between 50% and 70% of their yields from direct investments in their countries of origin (UNCTAD 2006: 186; World Bank 2007: 53).

The acquisition of bonds in issuance markets and portfolio investments strongly rose in the countries with "emerging financial markets". The liberalization of financial markets in the emerging countries has also opened up pension and investment funds, a welcome form of surplus appropriation (Chesnais 2006b: 41). Undertaking portfolio investments, institutional investors acquire enterprise shares and delegate the "value creation process" to the local companies, which must nevertheless submit to the rules of shareholder value-driven corporate governance. In the years 2003 to 2005, portfolio investments flowed in large extent to China, India and Southeast Asia (World Bank 2005, tab. 1.3; 2006: 52).

It corresponds to capitalist logic that creditors expect more money back than they originally offer as credit. Since the early 1980s, financial flows from debt payment and patent royalties, as well as from the transferred profits of transnational corporations to metropolitan countries, have represented considerable dispossessions of resources and revenues from the manpower of dependent peripheral countries (Serfati 2006: 88). Just as indebtedness through credits since the early 1980s caused an outflow of capital from emerging and peripheral countries to metropolitan financial institutions, so current direct and portfolio investments trigger a continuous capital transfer to transnational corporations and to pension and mutual funds. The consequences will only be recognized delayed.

The developing countries are already capital exporters to the rest of the world. Their aggregated surplus of current accounts has constantly risen since the year 2000 and amounted to 348.5 billion USD in 2006. Although the emerging countries have become targets of large direct and portfolio investments, these countries, primarily those in Asia, have been net financers of the capitalist core countries since 1998 (IMF 2006b: 38ff; World Bank 2005:56; 2006: 149; 2007: 37). In 2005, the foreign exchange reserves of developing countries swelled to 2,000 trillion USD. In autumn 2006, China's currency reserves alone rose to approximately 1 trillion USD (Schoettli 2007). A considerable part of this flows to the metropolitan countries, particularly to the U.S. (World Bank 2005:58; 2006: 151). Japan and China held almost half of the U.S. debt titles financed by foreign countries at the end of 2004 (Serfati

2006: 80; cf. Schoettli 2007). Financial investors from these countries obtain yields while financing a part of the U.S.'s imports from their own countries.

Property owners in the metropolitan countries profit as rentiers from the yields on credits, portfolio investments, direct investments and royalty payments. But also in the emerging and peripheral countries, property owners are those who can pocket interest income, which can be obtained due to the increase of domestic debts and foreign exchange reserves in their countries (Serfati 2006: 91). The financiers and investors from the metropolitan countries and emerging countries will claim revenues from their placements, and populations will have to pay for this steady value outflow with their manpower.

In parallel to the emerging power of concentrated placement capital first in the U.S and then in other the capitalist core countries capitalist accumulation increasingly shifted to Asia; in the late 1980s and early 1990s mostly to South Korea, Taiwan and Singapore, and after the Asian crisis to China and to a lesser extent to India. The rising importance of China as a world factory and India as a major provider of software also reflects a massive extension of manufacturing infrastructure and transnational subcontracting by transnational corporations from the U.S., Japan and Europe in these countries. These countries have become a real sink for surplus capital (Harvey 2003). The integration of additional huge areas into the capitalist economy resulted in a massive increase of labor supply on a global scale and, thus, in a sharpened competition between wage earners living on very different places in the world. The provision of cheap products from China and elsewhere also helped to keep down inflation, and reduce the reproduction costs of workers respectively the socially necessary labor what resulted in increased surplus labor in the capitalist core countries. However, this resulted in a financial regime with deflationist inclinations with its destabilizing effects. To realize the profits required by the shareholder value a sufficient demand is needed. Because the domestic wages and even the export do not sustain a dynamic demand the credit to households has obtained a major role in many capitalist core countries and particularly in the U.S. Holding huge amounts of U.S. treasury bonds China and other countries contribute refinance the debts of the U.S. households (Aglietta/Berrebi 2007: chapter 3, 63, 311). It

4. Conclusions and paths for further research

4.1 New configuration of capitalism

The major purpose of this contribution is to show that capitalism has profoundly changed in the last thirty years and that these changes should be considered by economic geography. Concentrated financial capital has taken command over the accumulation processes and income distribution. A finance-dominated accumulation regime has emerged which is hierarchically organized on a global scale. This new configuration first asserted itself in the U.S. and in the UK and now has global reach. Although the power of finance extends globally, its concrete manifestation in single countries depends on specific territorialized social relations, societal, economic and political conditions and path-dependencies. Even though nation states lost maneuverability in development policies, state policies were decisive in pushing financialization forward. Thus, the geographies of financialization and the finance-dominated accumulation regime unfold unevenly across space, societies and industries. Thus, the continuing financial and geopolitical dominance of the North Atlantic zone, above all the USA, which not least is based on the military predominance of the USA, is just one face of the same interrelated global reality which also is characterized by the increasing industrial power of China and India (cf. Aglietta/Landry 2007: 8). The capitalist economy is globalized in the sense of a global arena of valorization of capital and an increasingly global competition between workers. However, the monetary policies and decisions of central banks remain shaped by the decisions of the strongest national states. The relations between the Dollar, Euro, Pound sterling, Yen and Yuan remain “non-cooperative”.

The power of finance and shareholder valued-driven corporate governance has substantially changed income distribution on all scales. Income based on capital and on property monopolies has increased compared to income generated by labor. Particularly, financial rents based on property titles have become an important source of income. Moreover, repartition of surplus value has changed in favor of the means distributed to shareholders at the cost of retained and invested funds. The extraction and transfer of values through rents on all scales is a basic feature of the finance-dominated accumulation regime.

Responding to the pressure to increase profitability, corporate strategies aim to reduce the amounts of fixed capital, to externalize risks and to improve their ability to react to uncertainty. This orientation leads to new forms of industrial organization characterized by a stronger vertical disintegration and hierarchical global production networks. Transnational corporations are eager to acquire values produced by other companies and social communities that are often spatially concentrated. This tendency leads to hierarchical global value and resource flows, whereas the companies with a strong capital base as well as strong marketing power and property monopolies are more advantageously positioned to acquire externally produced values and resources. The division of profits in favor of shareholders has also modified corporate innovation strategies. In the new regime, the financing of innovation-related investments depends more on capital markets than on retained profits and bank credits. In many industries this results in shorter pay-back horizons and more volatile research spending.

Although profitability increased during the last two decades, accumulation in the capitalist core countries did not recover in the same way. The tendency of over-accumulation and financialization results in the transfer of a considerable part of surplus value into the financial sphere, where particularly high returns are expected. Moreover, capital practices massively extended accumulation by dispossession and expansion into non-capitalist areas. It can be expected that over-accumulation will increase again when the new capitalist spaces such as China cannot absorb enough capital because their domestic demand is too low (cf. Aglietta/Landry 2007). New contradictions will emerge when they increasingly export capital.

The power of rentiers and increasing rentier income are global phenomena. The instruments for organizing monetary flows to the strongest accumulation centers of the world include foreign debt, bonds, portfolio investments and direct investment. Foreign direct investments do not necessarily induce an extension of productive capacities. By financing privatization they can also appropriate foreign resources.

In the current finance-dominated accumulation regime, the characteristic value creation and transfer process can be summarized in the following sequence: The creation of value happens through labor in the production process. Likewise, firms appropriate and absorb resources through collaboration with other firms, public sources and nature. Based on property monopolies and specific power positions, resources can be enclosed and monopolized. Such monopolies are the base for extracting rents from the produced surplus. Then, a part of the value can be captured by placement capital either by means of dividends, by transforming property monopolies such as patents into tradable securities, or by issuing securities on monopolized natural resources or companies engaged in this sector. Thus in many industries, such as the pharma-biotech-complex, we can observe the existence of complex value and rent hierarchies or cascades (Zeller 2008c).

4.2 Fields for future research

The globalization of capital makes it more necessary than ever to understand the world economy not as the sum of its national entities but as a totality shaped by the international division of labor and by flows of capital and resources. The economic development of firms and regions must be perceived in context of their entwinements with the global economy. An appropriate theorizing of uneven development and economic geographical research must consider the changed configuration of capitalism. Phenomena such as spatial concentration and dispersion of economic activities, international division of labor, innovation systems, technological development, forms and configurations of territorial embeddedness and the entire income structure depend on the mechanisms described above.

Three interlinked fields of future theoretical and empirical research emerge to which economic geography can contribute. First, research on specific industries, production networks and innovation systems, or on specific national and regional conditions, should be placed in the context of developments on the macro-level and connected with an understanding of the uneven development of capitalism. How do the pressures of financial capital and its placement strategies influence technological development as well as regional and national conditions? How do specific institutions and rules reinforce or weaken such pressure? According to the thesis of the emergence of a finance-dominated accumulation regime, the institutions and forms of financial capital are inseparably interwoven with the capital placed and invested in industries. This raises the question of what kind of industrial organization would enable sustainable growth and permit large parts of the population to profit from the new insights and products of the industry.

A second challenge is to better understand the space of capital and resource flows. Financialization massively increased the transfer of values and resources on a global scale. Based on advantageous power relations, the stronger accumulation centers are able to acquire values and resources from other organizations, firms and territories. However, the concrete dynamics of such value cascades are still poorly investigated. Approaches need to be developed to theoretically and empirically grasp resource flows and value transfers between and within firms in different economic social contexts, also taking into account the extremely differentiated uneven development, both spatial and temporal, connected to these flows. This raises two further challenges: a.) illuminating how formal and informal labor respectively different forms of exploitation, are interrelated. and b.) critically researching the valorization of resources created in non-capitalist social relations and the geography of such valorization processes. Valorization of natural resources, increasingly subject to neo-colonial wars and ambitions, should receive particular attention.

The third challenge refers to the question of how the spaces of value flows interrelate with the places of value creation. Globalization of capital, financialization, global production networks as well as states and international organizations connect the fates of very different regions and places and their inhabitants to each other. Thus, capitalism evolves not only unevenly but also in a combined way. Value capture and transfer by rents permanently reconfigures uneven development. But how such capital flows between regions and industries shape economic prosperity, technological development and living conditions is poorly understood.

Literature

Aglietta, M. (2000): Shareholder value and corporate governance: some tricky questions, Economy and Society 29 (1), S. 146-159.

Aglietta, M./Berrebi, L. (2007): Désordres dans le capitalisme mondial. Paris: Odile Jacob.

Aglietta, M./Landry, Y. (2007): La Chine vers la superpuissance. Paris: Economica.

Alnasseri, S. (2003): *Ursprüngliche Akkumulation, Artikulation und Regulation. Aspekte einer globalen Theorie der Regulation*. U. Brand/W. Raza (Hg.): Fit für den Postfordismus? Theoretisch-politische Perspektiven des Regulationsansatzes. Münster: Westfälisches Dampfboot S. 131-157.

Amable, B. (2000): Institutional complementarity and diversity of social systems of innovation and production, Review of International Political Economy 7 (4), S. 645-687.

Amin, A./Nigel, T. (Hrsg) (1994): *Globalization, Institutions, and regional development in Europe*. Oxford

Argyres, N. S./Liebeskind, J. P. (1998): Privatizing the intellectual commons: Universities and the commercialization of biotechnology, Journal of Economic Behavior & Organization 35 (4), S. 427-454.

BEA (2007): International Data: US International Transactions, Survey of Current Business 87 (10).

Benko, G. (1996): Wirtschaftsgeographie und Regulationstheorie - aus französischer Sicht, Geographische Zeitschrift 84 (3+4), S. 187-204.

Blackburn, R. (2002): Banking On Death: Or Investing in Life: The History and Future of Pensions. London: Verso.

Borrus, M./Zysman, J. (1997): Globalization with Boarders: The Rise of Wintelism as the Future of Global Competition, Industry and Innovation 4 (2), S. 141-166.

Boschma, R. A./Frenken, K. (2006): Why is economic geography not an evolutionary science? Towards an evolutionary economic geography, Journal of Economic Geography 6 (3), S. 273-302.

Boyer, R. (1988): *Technical change and the theory of 'Régulation'*. G. Dosi/C. Freeman/R. Nelson/G. Silverberg/ L. Soete (Hg.): Technical Change and Economic Theory. London: Pinter Publishers S. 67-94.

Boyer, R. (1992): *Les alternatives au fordisme. Des années 1980 au XXIe siècle*. G. "Benko/A. Lipietz (Hg.): Les régions qui gagnent. Paris: Syros S. 189-223.

Boyer, R. (2000): Is a finance-led growth regime a viable alternative to Fordism? A preliminary analysis, Economy and Society 29 (1), S. 111-145.

Boyer, R. (2004): Théorie de la régulation. 1. fondamentaux. Paris: La Découverte.

Boyer, R./Saillard, Y. (2002): *Un précis de la régulation*. R. Boyer/Y. Saillard (Hg.): Théorie de la régulation. Paris: Éditions La Découverte S. 58-68.

Brenner, N. (2004): Urban governance and the production of new state spaces in western Europe, 1960-2000, Review of International Political Economy 11 (3), S. 447 - 488.

Brenner, R. (2002): The Boom and the Bubble: The US in the World Economy. London, New York: Verso.

Castree, N. (2003): Commodifying what nature?, Progress in Human Geography 27 (3), S. 273-297.

Castree, N. (2008): Neoliberalising nature: the logics of deregulation and reregulation, Environment & Planning A DOI: 10.1068/a3999.

Castree, N./Coe, N./Ward, K. (Hrsg) (2004): *Spaces of Work: Global Capitalism and Geographies of Labour*. London: Sage, 303 S.

Caves, R. E. (1996): Multinational enterprise and economic analysis (Second Editin). Cambridge: Cambridge University Press.

Chesnais, F. (1997): La mondialisation du capital (nouvelle édition augmentée). Paris: Syros.

Chesnais, F. (1999): *États rentiers dominants et contraction tendencielle - Formes contemporaires de l'impérialisme et de la crise*. G. Duménil/L. Dominique (Hg.): Le triangle infernal. Crise, mondialisation, financiarisation. Paris: Syros S. 95-120.

Chesnais, F. (2003): *Rapports de propriété et formes de captation du "cognitif" au bénéfice du capitalisme financier*. C. Vercellone (Hg.): Sommes nous sortis du capitalisme industriel? Paris: La Dispute S. 167-179.

Chesnais, F. (2004a): *Das finanzdominierte Akkumulationsregime: theoretische Begründung und Reichweite*. C. Zeller (Hg.): Die globale Enteignungsökonomie. Münster: Verlag Westfälisches Dampfboot S. 217-254.

Chesnais, F. (2004b): *Le capital de placement: accumulation, internationalisation, effets économiques et politiques*. F. Chesnais (Hg.): La finance mondialisé. Paris: Éditions La Découverte S. 15-50.

Chesnais, F. (2006a): *La préeminence de la finance au sein du "capital en general", le capital fictif et le mouvement contemporain de mondialisation du capital*. S. d. É. Marxistes (Hg.): La finance capitaliste. Paris: Presse Universitaires de France S. 65-130.

Chesnais, F. (2006b): *Mondialisation du capital, nature et rôle de la finance et mécanismes de "balkanisation" des pays aux ressources convoitées*. C. Serfati (Hg.): Mondialisation et déséquilibres Nord-Sud. Bruxelles: P.I.E. Peter Lang S. 33-52.

Chesnais, F./Sauviat, C. (2003): *The financing of innovation-related investment in the contemporary global finance-dominated accumulation regime*. H. M. M. Lastres/J. E. Cassiolato/ M. L. Maciel (Hg.): Systems of Innovation and Development: Evidence from Brazil. Cheltenham, G.B: Edward Elgar Publishers S. 25-73.

Chesnais, F./Serfati, C. (2004): *Die physischen Bedingungen der gesellschaftlichen Reproduktion*. C. Zeller (Hg.): Die globale Enteignungsökonomie. Münster: Westfälisches Dampfboot S.

Christopherson, S. (2002): Why Do National Labor Market Practices Continue to Diverge in the Global Economy? The “Missing Link" of Investment Rules, Economic Geography 78 (1), S. 1-20.

Clark, G. L. (1998): Pension fund capitalism: a causal analysis, Geografiska Annaler 80B (3), S. 139-157.

Clark, G. L. (2002): London in the European financial services industry: locational advantage and product complementarities, Journal of Economic Geography 2 (4), S. 433-453.

Clark, G. L. (2003): Pension security in the global economy: markets and national institutions in the 21st century, Environment & Planning A 35 (8), S. 1339-1556.

Cooke, P. (2001): New Economy Innovation Systems: Biotechnology in Europe and the USA, Industry and Innovation 8 (3), S. 267-289.

Cooke, P. (2004): The molecular biology revolution and the rise of bioscience megacentres in North America and Europe, Environment and Planning C: Government and Policy 22 (2), S. 161 - 177.

Coriat, B. (2002): Le nouvau régime américain de la propriété intellectuelle. Contours et caractéristiques clés, Revue d'économie industrielle (99, 2), S. 17-32.

Coriat, B. (2006): *Moves towards finance-led capitalism: the French case*. B. Coriat/P. Petit/ G. Schmeder (Hg.): The Hardship of Nations: Exploring the Paths of Modern Capitalism. Cheltenham, UK: Edward Elgar Pub S. 69-96.

Coriat, B./Orsi, F./Weinstein, O. (2003): Does Biotech Reflect a New Science-based Innovation Regime?, Industry and Innovation 10 (3), S. 231-253.

Cumbers, A./MacKinnon, D./McMaster, R. (2003): Institutions, power and space. Assessing the limits to institutionalism in economic geography, European Urban and Regional Studies 10 (4), S. 325-342.

Dasgupta, P./David, P. A. (1994): Toward a new economics of science, Research Policy 23 (5), S. 487-521.
De Angelis, M. (2004): Separating the Doing and the Deed: Capital and the Continuous Character of Enclosures, Historical Materialism 12 (2), S. 57-87.
Delapierre, M. (1997): Vers l'emergence d'oligopoles en réseau fondés sur la connaissance, Innovations. Cahiers d'économie de l'innovation 5 (1997-1), S. 93-103.
Delapierre, M. (2000): *Vers l'emergence de nouvelle formes d'oligopoles fondes sur la connaissance*. M. Delapierre/P. Moati/ E. M. Mouhoud (Hg.): Connaissance et Mondialisation. Paris: Economica S. 97-107.
Demir, F. (2007): The Rise of Rentier Capitalism and the Financialization of Real Sectors in Developing Countries, Review of Radical Political Economics 39 (3), S. 351-359.
Duménil, G./Lévy, D. (2003a): Économie marxiste du capitalisme. Paris: Éditions La Découverte.
Duménil, G./Lévy, D. (2003b): Néolibéralisme-Néomilitarisme, Actuel Marx. Le nouvel ordre impérial (33), S. 77-99.
Duménil, G./Lévy, D. (2004a): The economics of US imperialism at the turn of the 21st century, Review of International Political Economy 11 (4), S. 657 - 676.
Duménil, G./Lévy, D. (2004b): Le néolibéralisme sous hégémonie états-unienne.In F. Chesnais, editor, *La finance mondialisé*. Éditions La Découverte: Paris
Duménil, G./Lévy, D. (2004c): *Le néolibéralisme sous hégémonie états-unienne*. F. Chesnais (Hg.): La finance mondialisé. Paris: Éditions La Découverte S. 71-98.
Duménil, G./Lévy, D. (2005): *Costs and Benefits of Neoliberalism: A Class Analysis*. G. A. Epstein (Hg.): Financialization and the World Economy. Cheltenham, UK; Northhampton, MA, USA: Edwar Elgar S. 17-45.
Duménil, G./Lévy, D. (2006): Néolibéralisme: dépassement ou renouvellement d'un ordre social, Actuel Marx 40 (second semstre 2006), S. 86-101.
DWS (2007): DWS-Analyse der internationalen Fondsmärkte Jahr 2006: DWS Investments, Deutsche Bank Gruppe. 31. Mai 2007, *gesichtet:* 4. Juni 2007. http://www.dws.de/about/PressNewsDetail.aspx?id=106&NavId=1
Engelen, E. (2003): The logic of funding European pension restructuring and the dangers of financialisation, Environment & Planning A 35 (8), S. 1357-1372.
Epstein, G. A./Jayadev, A. (2005): *Rise of Rentier Incomes in OECD Countries: Financialization, Central Bank Policy and Labor Solidarity*. G. A. Epstein (Hg.): Financialization and the World Economy. Cheltenham, UK; Northhampton, MA, USA: Edwar Elgar S. 46-74.
Faulconbridge, J./Engelen, E./Hoyler, M./Beaverstock, J. (2007): Analysing the Changing Landscape of European Financial Centres: The Role of Financial Products and the Case of Amsterdam, Growth and Change 38 (2), S. 279-303.
Florida, R./Samber, M. (1999): *Capital and Creative Destruction: Venture Capital, Technological Change, and Economic Development*. M. Gertler/T. Barnes (Hg.): The New Industrial Geography: Regions, Regulations and Institutions. London, New York: Routledge S. 265-291.
Foray, D. (2002): Intellectual Property and Innovation in the Knowledge-Based Economy, isuma Canadien Journal of Policy Research 3 (1), S. 71-78.
Freeman, C. (1995): The 'National System of Innovation' in historical perspective, Cambridge Journal of Economics 19 (1), S. 5-24.
Freeman, C./Louça, F. (2002): As time goes by. From the Industrial Revolutions to the Information Revolution. Oxford, UK: Oxford University Press.
Gereffi, G./Humphrey, J./Sturgeon, T. (2005): The governance of global value chains, Review of International Political Economy 12 (1), S. 78-104.

Glassman, J. (2006): Primitive accumulation, accumulation by dispossession, accumulation by 'extra-economic' means, Progress in Human Geography 30 (5), S. 608-625.

Grabher, G. (2006): Trading routes, bypasses, and risky intersections: mapping the travels of 'networks' between economic sociology and economic geography, Progress in Human Geography 30 (2), S. 163-189.

Grote, M., H. (2007): Mobile Marketplaces - Consequences of the Changing Governance of European Stock Exchanges, Growth and Change 38 (2), S. 260-278.

Grote, M. H. (2003): *Distance in Finance - an Overview*. E. W. Schamp/A. Thierstein (Hg.): Innovation, Finance, and Space. Frankfurt am Main: Frankfurt Studies on Economic and Social Geography, No. 72, Department of Economic and Social Geography, Johann Wolfgang Goethe University Frankfurt S. 45-58.

Harvey, D. (1982): The Limits to Capital. Oxford: Basil Blackwell.

Harvey, D. (1989): From Managerialism to Entrepreneuialism: the transformation of urban governance in late capitalism, Geografiska Annaler 71 B (1), S. 3–17.

Harvey, D. (2003): The New Imperialism. Oxford, UK: Oxford University Press.

Harvey, D. (2005): A Brief History of Neoliberalism. Oxford, UK: Oxford University Press.

Harvey, D. (2006): Spaces of Global Capitalism: A Theory of Uneven Geographical Development. London, New York: Verso.

Henderson, J./Dicken, P./Hess, M./Coe, N./Wai-Chung Yeung, H. (2002): Global production networks and the analysis of economic development, Review of International Political Economy 9 (3), S. 436-464.

Herod, A. (1998): *The Spatiality of Labor Unionism: A Review Essay*. A. Herod (Hg.): Organizing the Landscape. Geographical Perspectives on Labor Unionism. Minneapolis: University of Minnesota Press S. 1-36.

Hilferding, R. (1910): Das Finanzkapital. Eine Studie über die jüngste Entwicklung des Kapitalismus. 1973. Berlin: Europäische Verlagsanstalt.

Hirsch, J. (1995): Der nationale Wettbewerbsstaat. Staat, Demokratie und Politik im globalen Kapitalismus. Berlin, Amsterdam: Edition ID-Archiv.

Hirsch, J. (1998): Vom Sicherheitsstaat zum nationalen Wettbewerbsstaat. Berlin: ID-Verlag.

Howells, J. (1999): *Regional systems of innovation*. D. Archibugi/J. Howells/ J. Michie (Hg.): Innovation Policy in a Global Economy. Cambridge: Cambridge University Press S. 67-93.

Hudson, R. (2006): On What's Right and Keeping Left: Or Why Geography Still Needs Marxian Political Economy, Antipode 38 (2), S. 374-395.

Husson, M. (2001): Le grand bluff capitaliste. Paris: La Dispute.

Husson, M. (2003): Les casseurs de l'État social. Des retraites à la Sécu : la grande démolition, Éditions La Découverte: Paris

Husson, M. (2004): *Der Kapitalismus nach der "neuen Ökonomie"*. C. Zeller (Hg.): Die globale Enteignungsökonomie. Münster: Verlag Westfälisches Dampfboot S. 127-159.

Husson, M. (2006): *Finance, hyper-concurrence et reproduction du capital*. S. d. É. Marxistes (Hg.): La finance capitaliste. Paris: Presse Universitaires de France S. 221-246.

IMF (2003): Global Financial Stability Report. Market Developments and Issues, September 2003. Washington, DC: International Monetary Fund.

IMF (2006a): Global Financial Stability Report. Market Developments and Issues, April 2006. Washington, DC: International Monetary Fund.

IMF (2006b): Global Financial Stability Report. Market Developments and Issues, September 2006. International Monetary Fund: Washington, DC

IMF (2007a): Global Financial Stability Report. Financial Market Turbulence Causes, Consequences, and Policies, September 2007. Washington, DC: International Monetary Fund.

IMF (2007b): *World Economic Outlook. Spillovers and Cycles in the Global Economy* April 2007, International Monetary Fund: Washington, DC, 302 S

Jäger, J. (2003): Urban Land Rent Theory: A Regulationist Perspective, International Journal of Urban and Regional Research 27 (2), S. 233-49.

Jeffers, E. (2004): *La place de L'Europe dans la valorisation mondiale des capitaux de placement financier*. F. Chesnais (Hg.): La finance mondialisé. Paris: Éditions La Découverte S. 146-170.

Jessop, B. (2000): *The state and the contradictions of the knowledge-driven economy*. J. R. Bryson/P. W. Daniels/N. Henry/ J. Pollard (Hg.): Knowledge, Space, Economy. London and New York: Routledge S. 63-78.

Kenney, M. (2000): *Note on "Venture Capital"*. BRIE Working Paper. (142), Berkeley Roundtable the International Economy: Berkeley, 10 S.

Keynes, J. M. (1936): The General Theory of Employment, Interest and Money. New York: Hacrout, Brace, Jovanitch.

Kogut, B. (2000): *The Transatlantic Exchange of Ideas and Practices: National Institutions and Diffusion*. Les Notes de l'IFRI. (26), L'Institut français des relations internationales (Ifri): Paris, 52 S

Lazonick, W./O'Sullivan, M. (2000): Maximizing shareholder value: a new ideology for corporate governance, Economy and Society 29 (1), S. 13-35.

Leyshon, A./Thrift, N. (1995): *Money/Space: Geographies of Monetary Transformation*. London: Routledge S.

Lipietz, A. (1986): *New tendencies in the international division of labor: regimes of accumulation and modes of regulation*. A. J. Scott/M. Storper (Hg.): Production, Work, Territory. The geographical anatomy of industrial capitalism. Boston: Allen &Unwin S. 16-40.

Lipietz, A. (1992): *The regulation approach and capitalist crisis: an alternative compromise for the 1990s*. M. Dunford/G. Kafkalas (Hg.): Cities and Regions in the New Europe. London: Belhaven Press S. 309–334.

Lordon, F. (2000): Fonds de pension, piège à cons? Mirage de la démocratie actionnariale. Paris: Raison d'Agir.

Lundvall, B.-Å. (1992): *Introduction*. B.-Å. Lundvall (Hg.): National systems of innovation: towards a theory of innovation and interactive learning. London: Pinter. S.

Luxemburg, R. (1913): Die Akkumulation des Kapitals. Ein Beitrag zur ökonomischen Erklärung des Imperialismus. Gesammelte Werke. Band 5, "Die Akkumulation des Kapitals". 1975. Berlin/DDR: Dietz Verlag.

Malerba, F. (2002): Sectoral systems of innovation and production, Research Policy 31 (2), S. 247-264.

Mandel, E. (1975): Late capitalism. London: NLB.

Mandel, E. (1991): Kontroversen um "Das Kapital". Berlin: Dietz.

Mandel, E. (1995): Long Waves of Capitalist Development. A Marxist Interpretation. 2nd revised Edition. London, New York: Verso.

Martin, R. (2000): *Institutional Approaches in Economic Geography*. E. Sheppard/T. Barnes, J. (Hg.): A Companion to Economic Geography. Oxford, UK; Cambridge, MA: Blackwell Publishers S. 77-94.

Martin, R./Sunley, P. (2003): Deconstructing clusters: chaotic concept or policy panacea?, Journal of Economic Geography 3 (1), S. 5-35.

Martin, R./Sunley, P. (2006): Path dependence and regional economic evolution, Journal of Economic Geography 6 (4), S. 395-437.

Marx, K. (1863): Theorien über den Mehrwert, Band 3. Karl Marx-Friedrich Engels-Werke (MEW) Band 26.3. 1993 (6. Auflage). Berlin: Dietz Verlag.

Marx, K. (1867): Das Kapital, Erster Band. Karl Marx-Friedrich Engels-Werke (MEW) Band 23. 1988. Berlin: Dietz Verlag.
Marx, K. (1894): Das Kapital, Dritter Band. Karl Marx-Friedrich Engels-Werke (MEW) Band 25. 1988. Berlin: Dietz Verlag.
Marx, K. (1976): Capital. A Critique of Political Economy, vol. 1. London: Penguin Books.
Marx, K. (1981): Capital. A Critique of Political Economy, vol. 3. London: Penguin Books.
May, C. (1998): Thinking, buying, selling: Intellectual property rights in political economy, New Political Economy 3 (1), S. 59-78.
May, C. (2000): A Global Political Economy of Intellectual Property Rights. The new enclosures? London, New York: Routledge.
McCarthy, J. (2004): Privatizing conditions of production: trade agreements as neoliberal environmental governance, Geoforum 35, S. 327-341.
McKinsey&Company (2007): *Mapping the Global Capital Market 2007. Third Annual Report* January 2007, McKinsey Global Institute: San Francisco, 20 S
Moulaert, F./Swyngedouw, E. (1989): A regulation approach to the geography of flexible production systems, Environment and Planning D: Society and Space 7 (3), S. 327–345.
Mowery, D. C./Rosenberg, N. (1993): *The U.S. Innovation System*. R. R. Nelson (Hg.): National innovation systems: a comparative analysis. New York: Oxford University Press S.
Nelson, R. R. (2004): The market economy, and the scientific commons, Research Policy 33 (3), S. 455-471.
Nelson, R. R./Rosenberg, N. (1993): *Technical innovation and national systems*. R. R. Nelson (Hg.): National innovation systems: a comparative analysis. New York: Oxford University Press S. 3-22.
Orléan, A. (1999): Le pouvoir de la finance. Paris: Odile Jacob.
Orsi, F. (2002): La constitution d’un nouveau droit de propriété intellectuelle sur le vivant aux États-Unis: Origine et signification économique d'un dépassement de frontière, Revue d'économie industrielle (99, 2), S. 65-86.
O'Sullivan, M. (2000): The innovative enterprise and corporate governance., Cambridge Journal of Economics 24 (4), S. 393-417.
O'Sullivan, M. (2004): *Finance and Innovation*. J. Fagerberg/D. C. Mowery/ R. R. Nelson (Hg.): The Oxford Handbook of Innovation. Oxford, UK: Oxford University Press S. 240-265.
Peck, J. (2005): Economic Sociologies in Space, Economic Geography 81 (2), S. 129-175.
Peck, J./Tickell, A. (2002): Neoliberalizing Space, Antipode 34 (3), S. 380-404.
Peck, J./Wai-Chung Yeung, H. (Hrsg) (2003): *Remaking the global economy : economic-geographical perspectives*. London.: Sage
Peet, R. (2003): Unholy trinity. The IMF, World Bank and WTO. London: Zed Books.
Peet, R./Hartwick, E. (1999): Theories of development. New York: Guilford Press.
Peet, R./Thrift, N. (Hrsg) (1989): *New models in Geography. The political-economy perspective*. London: Unwin Hyman
Perez, C. (2002): Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden Ages. Cheltenham, UK: Edward Elgar.
Pike, A. (2006): 'Shareholder value' versus the regions: the closure of the Vaux Brewery in Sunderland, Journal of Economic Geography 6 (2), S. 201-222.
Pisano, G. (2006): Can Science Be a Business? Lessons from Biotech, Harvard Business Review, S. 114-125.
Power, D./Epstein, G./Abrena, M. (2003): *Trend In The Rentier Income Share In OECD Countries, 1960-2000*. Working Paper Series. (58a), Political Economy Research Institute, University of Massachusetts, Amherst, 77 S

Ricardo, D. (1817): On the principles of political economy and taxation. 1951 Cambridge University Press. Cambridge.
Robinson, J. (1956): The accumulation of capital. Third Edition 1971. London, Basingstoke: Macmillan.
Sablowski, T./Rupp, J. (2001): Die neue Ökonomie des Shareholder Value. Corporate Governance im Wandel, PROKLA, Zeitschrift für kritische Sozialwissenschaft 31 (122 / 1), S. 47-78.
Sassen, S. (1991): The Global City. New York, London, Tokyo. Princeton, NJ.: Princeton University Press.
Sauviat, C. (2004): *Les fonds de pension et les fonds mutuel: acteurs majeurs de la finance mondialisée et du nouveau pouvoir actionnarial*. F. Chesnais (Hg.): La finance mondialisé. Paris: Éditions La Découverte S. 99-124.
Schoettli, U. (2007): Mythen um und Fakten zu Chinas Reserven. Eine Billion Dollar, die nicht nur Freude bereitet. *Neue Zürcher Zeitung*, 19. März, S. 14.
Sell, S./May, C. (2001): Moments in law: contestation and settlement in the history of intellectual property, Review of International Political Economy 8 (3), S. 467-500.
Serfati, C. (2001): La mondialisation armée, le déséquilibre de la terreur. Paris: Textuel, La Discorde.
Serfati, C. (2003): *La logique du capital financier au coeur des rapports de production contemporains*. C. Vercellone (Hg.): Sommes nous sortis du capitalisme industriel? Paris: La Dispute S. 181-206.
Serfati, C. (2004): Impérialisme et militarisme: actualité du vingt-et-unième siècle. Lausanne: Éditions Page Deux.
Serfati, C. (2006): *La mondialisation financière. Le triomphe des rentiers*. B. Jouve/Y. Roche (Hg.): Des flux et des territoires. Vers un monde sans États? Quebec: Presse de L'Universitéde Quebec S. 71-104.
Sheppard, E./Barnes, T. J./Pavlik, C. (1990): The Capitalist Space Economy. Geographical Analysis after Ricardo, Marx ans Sraffa. London: Unwin Hyman.
Smith, A./Rainnie, A./Dunford, M./Hardy, J./Hudson, R./Sadler, D. (2002): Networks of value, commodities and regions: Reworking divisions of labour in macro-regional economies, Progress in Human Geography 26 (1), S. 41-63.
Smith, N. (1984): Uneven development: Nature, Capital and the Production of Space. 1990. Oxford, Cambridge: Basil Blackwell.
Stockhammer, E. (2004): Financialisation and the slowdown of accumulation, Cambridge Journal of Economics 28 (5), S. 719-741.
Stockhammer, E. (2005): Shareholder value orientation and the investment-profit puzzle., Journal of Post Keynesian Economics 28 (2), S. 193-215.
Stockhammer, E. (2007): *Some Stylized Facts on the Finance-Dominated Accumulation Regime*. Working Paper Series. (142) July, Political Economy Research Institute University of Massachussetts Amherst: Amherst, MA, 26 S
Storper, M./Walker, R. (1989): The Capitalist Imperative. Territory, Technology, and Industrial Growth. NewYork: Basil Blackwell.
Sturgeon, T., J. (2002): Modular Production Networks: A New American Model of Industrial Organization, Industrial and Corporate Change 11 (3), S. 451-496.
Swyngedouw, E. (1992): *The Mammon quest. Glocalisation, interspatial competition and the monetary order: The construction of new scales*. M. Dunford/G. Kafkalas (Hg.): Cities and Regions in the New Europe. London: Belhaven Press S. 39–67.
Swyngedouw, E. (1997): *Neither Global nor Local: 'Glocalisation' and the Politics of Scale*. K. Cox (Hg.): Spaces of Globalization: Reasserting the Power of the Local. New York, London: Guilford/Longman S. 137-166.

Swyngedouw, E. (2000a): *Elite Power, Global Forces, and the Poltical Economy of 'Glocal' Development*. G. L. Clark/M. P. Feldman/ M. S. Gertler (Hg.): The Oxford Handbook of Economic Geography. Oxford, New York: Oxford University Press S. 541-558.
Swyngedouw, E. (2000b): *The Marxian Alternative: Historical-Geographical Materialism and the Political Economy of Capitalism*. E. Sheppard/T. Barnes, J. (Hg.): A Companion to Economic Geography. Oxford, UK; Cambridge, MA: Blackwell Publishers S. 41-59.
The Economist (2007a): Buttonwood - The profits puzzle... *Economist*, 13 September
The Economist (2007b): Securitisation - When it goes wrong... *Economist*, 22 September.
Theurillat, T./Corpataux, J. (2007): *Les mutations de la gouvernance financière en Suisse*. Working Paper. (02/2007-F) Mars, 27 S
Theurillat, T./Corpataux, J./Crevoisier, O. (2006): *Property Sector Financialisation: The Case of Swiss Pension Funds (1994-2005)*. Working Papers in Employment, Work and Finance:. (WPG06-15), Oxford University, Centre for the Environment: Oxford, UK.
Theurillat, T./Corpataux, J./Crevoisier, O. (2007): *The Impact of Institutional Investors on Corporate Governance*. Working Paper. (04/2007-E) Mars, 29 S
Theurillat, T./Corpataux, J./Crevoisiser, O. (2007): *How does the financial industry expand in the economy? A territorial approach based on Swiss pension funds*. Working Paper. (03/2007-E) May, 40 S
Tickell, A./Peck, J. A. (1992): Accumulation, regulation and the geographies of post-Fordism: missing links in regulationist research, Progress in Human Geography 16 (2), S. 190-218.
Toussaint, E. (2000): Profit oder Leben. Neoliberale Offensive und internationale Schuldenkrise. Kön: Neuer ISP-Verlag.
UNCTAD (2004): World Investment Report 2004 - The Shift Towards Services. New York and Geneva: United Nations Conference on Trade and Development.
UNCTAD (2006): World Investment Report 2006 - FDI from Developing and Transition Economies: Implications for Development. United Nations Conference on Trade and Development: New York and Geneva.
Veltz, P. (1996): Mondialisation, Ville et Territoires. L'économie d'archipel. Paris: Presses Universitaires de France.
Walker, R. A. (1995): *Regulation and Flexible Specialisation as Theories of Capitalist Development. Challengers to Marx and Schumpeter?* H. Liggett/D. C. Perry (Hg.): Spatial Practices. Critical Explorations in Social/Spatial Theory. Thousand Oaks, London, New Delhi: Sage S. 167-208.
Walker, R. A. (1999): Putting capital in its place: globalization and the prospects for labor, Geoforum 30 (3), S. 263-284.
Webber, M. (2007): *The Places of Primitive and Environmental Enquiry*. Paper presented at 2nd Global Conference on Economic Geography, Beijing, 23 S.
Williams, K. (2000): From shareholder value to present-day capitalism, Economy and Society 29 (1), S. 1-12.
Wills, J. (1998): Taking on the CosmoCorps? Experiments in Transnational Labor Organization, Economic Geography 74 (2), S. 111-130.
Wojcik, D. (2006): Convergence in corporate governance: evidence from Europe and the challenge for economic geography, Journal of Economic Geography 6 (5), S. 639-660.
Wójcik, D. (2003): Change in the German model of corporate governance: evidence from blockholdings 1997-2001, Environment & Planning A 35 (8), S. 1431-1458.
World Bank (2005): *Global Development Finance. Mobilizing Finance and Managing Vulnerability*, The International Bank for Reconstruction and Development / The World Bank: Washington, D.C., 171 S

World Bank (2006): *Global Development Finance. The Development Potential of Surging Capital Flows*, The International Bank for Reconstruction and Development / The World Bank: Washington, D.C., 205 S

World Bank (2007): *Global Development Finance. The Globalization of Corporate Finance in Developing Countries*, The International Bank for Reconstruction and Development / The World Bank: Washington, D.C., 144 S

Zeller, C. (2008a): Financial flows and uneven development
in the global economy, Espace - Working Paper Series (Geographisches Institut der Universität Bern) (3).

Zeller, C. (2008b): Financing biotechnology in the US in a finance-dominated accumulation regime, Submitted to Geoforum.

Zeller, C. (2008c): From the gene to the globe: Extracting rents based on intellectual property monopolies, Review of International Political Economy 15 (1), S. 86-115.