

# **“Global commodity chains or global production of surplus value? On the content and forms of contemporary capitalist competition on a world scale”**

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## **Introduction**

With the debate between ‘statist’ Institutional political economy (REFS Wade, Amsden, Chang) and neo-classical economists (REF Krueger, Balassa, World Bank) running out of steam by the late 1990s {Sturgeon, 2003 #4, p. 4}, new theories emerged that tried to offer a more balanced response to the intellectual stalemate of development studies. Specifically, many theories acknowledged the rational kernel of the Institutional argument, whilst attempting to overcome its limitations. The lesson to be drawn was not only an empirical point about the role of state intervention in the process of economic development (i.e. the so-called ‘developmental state’). More generally, scholars recognised the validity of that school’s emphasis on national institutional specificities and divergence in the developmental patterns. However, there was also a general feeling of dissatisfaction with the rather one-sided ‘national turn’ of Institutional approaches. In effect, one could argue that the Institutional reaction to the inability of classic theories of development (cf. Dependency, Imperialism, World-systems) to account for the diversity of developmental paths was, as it were, an *overreaction*, which went to the other extreme of simply overlooking the question of the ‘structural’ unity of the global accumulation of capital.

Thus, the challenge for critical development studies was to give its due place to variation in the industrialisation experiences of different countries, whilst at the same time taking the unity of the world market seriously. This meant, crucially, recognising the reality of ‘globalisation’ and its impact on the potentialities for the successful industrialisation of less developed countries. The Global Commodity Chains (GCC) approach can be regarded as one of the most influential contemporary theories of international economic development to have emerged out of that intellectual climate. It is part of a growing number of diverse traditions that have been converging into what could be labelled ‘network-led development paradigm’. These related approaches see the problematic of development through the lenses of some

variant of the concept of ‘chains’ or ‘networks’ {Henderson, 2002 #3, p. 448}.<sup>1</sup> Without wanting to downplay the differences between the varied intellectual traditions in this broad group of development theories, they all share a common set of assumptions and concerns. First, they all recognise the novelty of phenomena generally associated with the ‘globalisation’ of the capitalist economy, which they define in terms of the emergence of a pattern of global dispersion with functional integration of economic activities {Dicken, 2003 #1, p. 12}. Secondly, they see the configuration of global production networks of firms as fundamental drivers of these economic transformations and, therefore, as the context in which to rethink the problematic of development {Yeung, 2007 #2, p. 1}. In particular, participation in these networks or chains is considered to be a central determining factor of different developmental outcomes by providing opportunities for ‘upgrading’ of firms that can spill over to the rest of the national economy {Kaplinsky, 2000 #5; see \Bair, 2005 #6, pp. 167ff., for a critical assessment of the concept of upgrading }. Against the backdrop of these intellectual trends in development theory, the GCC approach is therefore explicitly concerned to account for both ‘unity’ and ‘difference’ in the world market. The concept of ‘commodity chain’ is precisely the link which is meant to mediate the unity of the world economy with the differential ways in which that unity obtains in particular nations, regions or industrial sectors.

There is no doubt that studies informed by the GCC approach have provided rich empirical analyses of the functional articulation of particular branches of industry dispersed across the globe. In effect, research stemming from the GCC tradition offers very detailed and informative accounts of the current forms of intra-capitalist competition in different commodity chains. Those studies can thereby be taken as a useful *starting point* for the investigation of the more *general determinations* that underlie the relationships among the different individual capitals along each chain.

However, some further questions arise concerning its contribution to our comprehension of the contemporary forms of global capital accumulation. In the first place, a critical assessment of the GCC approach should evaluate its merits as a *theory of international development*. In other words, it should assess the extent to which it lives up to the claim to provide an understanding of the world market which does justice both to its underlying ‘structural’ unity and the varied patterns of national

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<sup>1</sup> Related approaches include international production networks {Borras, 2000 #11}, global production networks {Henderson, 2002 #3} and the French *filière* approach {Raikes, 2000 #12}.

differentiation. Such an overall assessment of the GCC approach as a theory of development is not, however, the path that I shall follow in this paper.<sup>2</sup>

Instead, my aim here is much more modest but, at the same time, focuses on an aspect which has remained unexplored in the critical literature: this paper subjects to critical scrutiny the very concept of commodity chain through the lenses of the Marxian ‘law of value’. Given this limited scope, the paper shall only examine one of the two constitutive components of GCCs concept. Thus, the discussion focuses on the determinations of the ‘chain-form’ taken by the current forms of capitalist competition at the expense of setting to one side its global dimension. To freely borrow a useful distinction from Yeung {, 2007 #2, p. 4}, I centre the examination of GCCs on the ‘organisational fix’ in GCCs and not so much on its ‘spatial fix’. Whilst the latter idea originally developed by Harvey {, 1982 #10} refers to the geographical relocation undertaken by capital in order to maintain its profitability, the former tries to capture the way in which global lead firms reorganise their network of suppliers in order to maximise their profitability.

Through a detailed engagement with the general foundations of the GCC approach, the paper makes the following two main points. In a more critical vein, I shall argue that despite its informative character, the GCC approach does not actually provide an *explanation* of the very specific phenomenon that it sets to investigate. What commodity chain studies do is simply to offer, through an essentially inductive-empiricist methodology, a typological *description* of the *immediate outer manifestations* of the determinations at stake. This failure firmly to explain the nature of GCCs is expressed, for instance, in the disjuncture between the portrayal of the *particular* dynamics internal to each industry and the *general* dynamics of the ‘system as a whole’. More constructively, this paper offers an alternative account of the social determinations underlying the genesis, structure and evolving configuration of GCCs. It is argued that the Marxian ‘law of value’ can provide more solid foundations to this novel form of capitalist competition on a world scale.

## **2. Outline of the GCC approach**

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<sup>2</sup> See {Bernstein, 2006 #7; Bernstein, 2006 #8; Taylor, 2007 #9} for critical discussions of the GCC approach as a theory of development.

The concept of GCC aims to capture the novel type of inter-firm linkages that articulate the functional integration of globally dispersed activities that characterise the present era of globalisation {Gereffi, 1994 #14, p. 96}. As a unit of analysis, the concept of GCC refers to,

‘(...) the full range of activities, *including coordination*, that are required to bring a specific product from its conception to its end use and beyond. This includes activities such as design, production, marketing, distribution, support to the final consumer, and governance of the entire process’ {Gibbon, 2005 #13, p. 77}.

As Bernstein and Campling note {Bernstein, 2006 #8, p. 439}, the main focus of commodity chain analysis lies in the realm of the *relation between individual capitals*. In particular, GCC research has attempted to illuminate the different types of international network-forms that co-ordinate the division of labour underlying each final product and which cannot be grasped through the traditional binary opposition between ‘market’ and ‘hierarchy’ {Palpacuer, 2003 #16; Gereffi, 2005 #17}. As Gereffi et al. note against the predictions of transaction cost approaches {Williamson, 1975 #18} and building on the insights of network theories {Thorelli, 1986 #19; Powell, 1990 #20}, ‘co-ordination and control of global-scale production systems, despite their complexity, can be achieved without direct ownership’ (2005, p. 81). These different ways of articulating complex global production systems are reflected in varied and shifting *governance structures*.

The concept of governance was originally devised to depict the diversity of authority and power relationships that give overall co-ordination to the division of labour within the commodity chain. Specifically, the governance structure was seen by Gereffi as socially mediating the material interdependency that characterises the ‘input-output structure’ of each GCC (i.e. the sequence of value-adding economic activities), insofar as it determines ‘how financial, material, and human resources are allocated and flow within a chain’ {Gereffi, 1994 #14, p. 97}. This was all the more necessary since that input-output structure had a *globally dispersed coverage*. In turn, this concept of governance is intimately connected with the concept of *drivenness* of GCC or, what amounts to the same thing, the determination of lead firms as *chain drivers*. These are the most powerful capitals which are in command of the overall

commodity chain co-ordination due to their ability to exert control over the other nodes of the network of firms {Gereffi, 2001 #21, p. 1622; Bair, 2006 #22}. In this early formulation, the concept of GCC was underpinned by a 'strong' notion chain drivenness {Bernstein, 2006 #7}, in which lead firms strategically exerted their power in order to configure GCCs in the benefit of their own profitability. In this sense, GCC analysis was seen to be a methodology that could shed light on the intrinsic connection between power and profits. According to Gereffi, 'profitability is greatest in the relatively concentrated segments of global commodity chains characterized by high barrier to the entry of new firms' {, 2001 #21, p. 1620}. In 'apportioning roles to key players' within a network of firms {Kaplinsky, 2000 #5}, lead firms end up regulating how much profit accrues at each stage of the chain {Gereffi, 2001 #21, p. 1620}.

Now what is the source or material basis of the relative power of each firm (and in particular that of chain drivers)? The answer to this question leads us to what is another key element of the GCC approach, namely, the related concepts of economic rents and barriers to entry {Kaplinsky, 2000 #5, p. 122}. Lead firms obtain their exceptional profitability as a result of their capacity to generate different kinds of rents, which are defined as 'returns from scarce assets' {Gereffi, 2001 #21, p. 1620}. These scarce assets, which can be tangible (machinery), intangible (brands) or intermediate (marketing skills), provide the foundation for the emergence of barriers to entry and thereby give rise to those different sorts of extraordinary economic rents: technological, organisational, brand-name, relational and so on {Gereffi, 2001 #21, p. 1621}. Moreover, these assets provide the basis for the definition of the core competencies that lead firms will tend to monopolise (e.g. R&D, design, manufacturing, marketing and so on).

Although there is no *a priori* precise node in the chain where a lead firm will tend to be situated (i.e. lead firms are not necessarily involved in the making of the finished product and can be located upstream or downstream from manufacturing, see Gereffi 2001, p. 1622), early GCC empirical research claimed that there were two main types of commodity chains: *producer-driven commodity chains* (PDCCs) and *buyer-driven commodity chains* (BDCCs). The former tend to predominate in capital- and technology intensive industries (automobiles, computers, aircraft and electrical machinery) and generally involve a powerful manufacturer that has tight control over a vertically-organised network of suppliers consisting of several tiers. Core

competencies are usually final assembly and R&D {Bair, 2005 #6, p. 159}. BDCCs tend to predominate in lighter, labour-intensive industries (apparel, toys, footwear, consumer electronics); their organisation is generally under the command of 'big buyers' (designers, retailers, brand-name firms) that monopolise the functions of design, marketing and distribution, and which outsource the whole manufacturing stage (as opposed to components) to a more horizontally-organised and decentralised network of small- and medium-sized firms {Bair, 2005 #6, p. 159}.

Subsequently, partly as a response to criticisms of the simplistic nature of the PDCC/BDCC dichotomy and partly as a result of further empirical observation of different and changing configurations of commodity chains {see Sturgeon, 2002 #23, on recent developments in the electronics industry that contradict that dichotomy,; and Raikes, 2000 #12, for a general appraisal of the limits of Gereffi's original formulation}, Gereffi and his colleagues came up with a more complex typology involving five different types of chain governance {Gereffi, 2005 #17}. This five-fold typology also reflects the more recent incorporation into the GCC approach of insights from the new economic sociology, with its emphasis on notions like 'embeddedness' and 'networks' {Granovetter, 1985 #24; Ingham, 1996 #25}. In this new characterisation of types of GCC, governance structures 'move along a spectrum that starts with un-embedded "arms-length" market relations, moves through modular, relational and captive value chains, and culminates in "hierarchy", which relates to the complete vertical integration of production within a unitary transnational enterprise' {Taylor, 2007 #9, p. 8}. The constitution of each particular type of commodity chain is a function of three key determinants: complexity of transactions, ability to codify transactions and capabilities in the supply-base {Gereffi, 2005 #17, p. 87}. In turn, each of the five governance-types along the spectrum from market to hierarchy involves increasing degrees of explicit co-ordination and power asymmetry {Gereffi, 2005 #17, p. 87}. In consonance with the new economic sociology literature, this new typology emphasises that the embeddedness of economic transactions in broader social relations does not only lead to co-ordination of inter-firm networks through sheer power relations, but also through 'trust' and 'mutual co-operation'. Still, the point remains that in all cases the emphasis lies in the way in which these networks of firms are socially regulated through a certain degree of what GCC theorists call 'explicit co-ordination', i.e. they are not completely evanescent and impersonal. In

other words, linkages between firms in commodity chains are regulated through *direct* (i.e. conscious and voluntary) social relations.

Now there is no doubt that studies informed by the GCC approach have provided rich empirical analyses of the functional articulation of particular branches of industry dispersed across the globe. In effect, research stemming from the GCC tradition offers very detailed and informative accounts of the current forms of intra-capitalist competition in the different ‘commodity chains’. However, a closer scrutiny of the foundations of theoretical edifice of the GCC approach suggests that it does not actually provide a satisfactory explanation of the constitution and dynamics of commodity chains. In the next section, we substantiate this point through a more critical engagement with the concept of GCC.

### **3. The limits of GCC analysis**

As Taylor notes {Taylor, 2007 #9, p. 8}, it is striking for a theory whose explicit aim is ‘to understand where, how and by whom value is created and distributed along a commodity chain’ {Bair, 2005 #6, p. 157}, that GCC research operates with a heavily under-theorised conception of the determinations regulating the generalised production and exchange of commodities, i.e. with a very undeveloped ‘theory of value’. In part, this could be accounted for by the peculiar disciplinary composition of GCC researchers. As Bernstein and Campling highlight, most contributors to ‘commodity studies’ tend to come from disciplines other than economics (mainly sociology, but also political science and geography) {Bernstein, 2006 #7, p. 242}. But more importantly, we think that this lack of rigorous engagement with the economic determinations of value is a necessary consequence of the underlying ‘theory of value’ which is nonetheless implicit in the GCC approach itself.

Thus, it is not entirely accurate to say that there is no underlying ‘theory of value’ at all in the GCC approach. When more closely scrutinised, it becomes clear that the whole GCC edifice does rest on a certain understanding of the determinations of value and its concrete forms of movement. In fact, one could argue that there are at least three different ways in which GCC analysis grounds the social constitution and dynamics of ‘globally dispersed networks of firms’ as far as ‘value-theory’ is

concerned. In its origins, i.e. as it emerged out of the World-System approach, GCC analysis was broadly based on the intellectual lineage of *Monopoly Capital theory*. Later on, GCC researchers tended to veer (more or less explicitly) towards neo-Schumpeterian general theoretical foundations. More recently, GCC research (now under the unifying label of Global Value Chains or GCV, which gathers scholars working from similar but different traditions) have either relied on the insights from ‘network approaches’ developed within the new economic sociology or have shifted to an industrial or business organisation focus with little interest in the connection between the constitution of commodity chains and the dynamics of the system as a whole.<sup>3</sup> Thus, whilst in the first two cases some conception of the system-wide economic laws of regulation still remained in place, in the recent sociological turn the idea of a general economic determination of ‘value creation and capture’ is entirely jettisoned and replaced with an account explicitly and entirely based on the pure contingency of immediate direct social relations. In all cases, however, the very phenomenon of the constitution and dynamics of GCC remains without firm foundation in the laws of motion of the capitalist economy as a whole. More concretely, I shall argue that the GCC approach cannot properly explain its very own object of inquiry. Thus, it generally presupposes what needs to be explained as far as the constitution of GCCs is concerned or, in relation to their dynamics, is poorly equipped to understand the real social processes underlying the transformations in their structure and forms of ‘governance’, only offering *ad hoc* retroactive rationales. The rest of this section examines these issues.

### *Monopoly Capital in the age of globalisation?*

Although rarely noted by commentators, it is remarkable that one of the founding contributions to the GCC paradigm by Gereffi, Korzeniewicz and Korzeniewicz {Gereffi, 1994 #27} explicitly situated the emerging approach broadly within the intellectual lineage of monopoly capital theory. Or rather, in what the World-System approach shared with it. Thus, building on the contribution to the book *Commodity Chains and Global Capitalism* by Hopkins and Wallerstein {Hopkins, 1994 #26}, the editors of the volume stated that ‘monopoly and competition are key

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<sup>3</sup> See Bair {, 2005 #6} for an account of the intellectual evolution of the GCC paradigm since its World-System origins into its more recent industrial organisation/management theory turn.

to understanding the distribution of wealth among the nodes in a commodity chain' {Gereffi, 1994 #27, p. 2}. The argument was that competitive pressures were unevenly distributed along the chain. Whilst innovation allowed core-like nodes in the chains to be relatively insulated from the forces of capitalist competition, peripheral firms suffered the transfer of competitive pressures onto their shoulders {Gereffi, 1994 #27, p. 3}. Accordingly, profitability was said to be distributed along the chain following the relative intensity of competition within different nodes {Gereffi, 1994 #27, p. 4}. Hopkins and Wallerstein in particular, referring to chain nodes as 'boxes', posed the question in a specifically *Marxist* way:

'If one thinks of the entire chain as having a total amount of surplus value that has been appropriated, what is the division of this surplus value among the boxes of the chain? This is the kind of issue that lay behind the debate on unequal exchange' {Hopkins, 1994 #28, p. 49}

The answer given by these authors strongly resonates with the tradition of Monopoly Capital theory, namely: the division of the economy into two fundamental sectors according 'to the degree to which the box is relatively monopolized by a small number of units of production, which is the same as asking the degree to which it is core-like and therefore the locus of a high rate of profit (often misleadingly called the "value-added")' {Hopkins, 1994 #26, p. 18}.<sup>4</sup> Following from this, they argued that there were relatively monopolised/high rate of profit sectors, and more competitive/low profitability sectors {Hopkins, 1994 #26, p. 18}. This was not based on a static and a-historical conception of the structure of commodity chains. Indeed, in distancing themselves from those approaches which tended to absolutise the dominance of the secondary sector (i.e. manufacturing) as the motor of capitalist development, Hopkins and Wallerstein made clear that the particular boxes that contained high profitability (hence that were 'core-like') were historically variable and shifted with the evolution of society, given the trend toward demonopolisation of any high profit boxes that characterises the capitalist world-system. However, the fact remained that there was always a differentiation between high and low profitability

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<sup>4</sup> Incidentally, this misleading labelling of the rate of profit eventually turned out to be a common feature of the GCC approach in its more recent incarnations. Despite vague references to profitability, their focus tends to be on the decomposition of the total value added in the chain into the share of each node. We come back to this below.

sectors, which reflected the degree of relative monopolisation, and with ‘big capital’ always shifting boxes or nodes in seeking to restore high level of profits when competitive pressures increased {Hopkins, 1994 #26, p. 18}.

In his seminal chapter in that volume, Gereffi built on this general framework in order to develop his now well-known distinction between PDCCs and BDCCs that we discussed in the previous section. Following the teachings of (mainstream) ‘industrial organisation economics’, Gereffi claimed that the type of commodity chain that tended to predominate in any branch of production expressed the kind of high *barriers* that prevented the entry of new firms in those more concentrated segments of the industry {Gereffi, 1994 #14, p. 104}. These barriers to entry were generated by the privileged access by some firms to specific capital and technology in PDCCs or product development, advertising and computerised store networks in BDCCs. This key economic role gave those core firms not only higher profitability (due to greater ‘market power’), but also the power to control forward and backward linkages along the chain {Gereffi, 1994 #14, p. 104}.

It is not hard to recognise in the above stylised account of the World-System foundations of the GCC approach most of the elements of Monopoly Capital theory, albeit refashioned for a globally-dispersed but functionally-integrated hierarchical network of firms.<sup>5</sup> In the first place, there is the differentiation of sectors in the world economy into a monopolised and a competitive one, with firms in the former standing above the competitive equalisation of the rate of profit. Secondly, we have the degree of industrial concentration as the basis for that differentiation. Thirdly, the latter is seen as the expression of the presence of barriers to entry in some segments of the industry. Fourthly, this leads to a hierarchy of profit rates based on differential market power (i.e. the capacity to administer prices or, more generally, the broader conditions for the circulation of capital – including the allocation of commercial credit and financial resources, etc - within the chain), with more concentrated firms appropriating a portion of the profits that would have corresponded to firms in the non-concentrated sector. Finally, even when some general economic foundation for the determinations of capitalist competition is retained (cf. Mandel, Hilferding), this

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<sup>5</sup> We include under the label ‘monopoly capital theory’ not just the Monthly Review tradition as developed by Baran and Sweezy but the diverse array of contributions which shared the main tenets of that approach (e.g. Hilferding, Lenin, Mandel, Kalecki and the post-Keynesians, Aglietta). See Astarita {, 2004 #29} for a more detailed critical appraisal of each particular version of the theory.

line of reasoning cannot but end up conceiving of the motion of capitalist society as the outcome of purely subjective forces or power relations.

Now, as has been pointed out by many Marxists since the 1980s, the theory of Monopoly Capital is heavily flawed, both empirically and theoretically {Semmler, 1982 #33; Bryan, 1985 #32; Wheelock, 1983 #34; Astarita, 2004 #29}. We cannot rehearse those arguments in any detail here. However, there are some fundamental issues that deserve to be briefly revisited. As Shaikh {, 2006 #31} and Clifton {, 1977 #30} in particular forcefully argued, far from leading to the mitigation of the pressures of competition, the progress in the concentration and centralisation of capital actually results, if anything, in its intensification, since the greater the size of individual capitals the more varied the weapons at their disposal in the competitive battle. More concretely, these authors persuasively argued that there is no real basis for the belief that increasing industrial concentration would allow certain capitals to stand above the objective determinations regulating the competition between individual capitals, let us say, the capitalist 'law of value'.

The problem with these Marxist critics of Monopoly Capital theory is, however, that their reassertion of the Marxian view of capitalist competition was essentially made in dogmatic terms. Thus, in their defence of the continued validity of the 'law of value' for the understanding contemporary forms of capitalist competition, they never actually managed to provide a convincing alternative explanation of what is, I think, an undeniable fact rightly captured empirically by GCC analysis, namely: the *systematic* reproduction of a cross-branch hierarchy of profit rates with the constitution of globally dispersed networks of formally independent capitals. If the GCC approach initially offered a flawed explanation more or less based on Monopoly Capital theory, the critics of the latter simply explained this kind of economic phenomenon away, and therefore offer no insight into the determinations of capitalist competition that underpin commodity chains. The only conceivable differentiation of valorisation capacities among individual capitals that the critics of Monopoly Capital theory could allow was *within* industrial sectors (as different capitals use methods of production of varying age) but, as far as *inter*-branch competition is concerned, they could only see a tendency for the equalisation of rate of profits with any inequality being only a temporary, short-to-medium term phenomenon {cf. \Weeks, 1981 #35;

Reuten, 1991 #37; Guerrero, 1995 #36; Shaikh, 2006 #31}.<sup>6</sup> These Marxist critics therefore provide us with no elements for a proper comprehension of the nature of commodity chains.

The key point to make here is that, in fact, both positions in the debate focus on the wrong aspect of the question. That is, both the theories of Monopoly Capital (including its derivatives like the GCC approach) and its critics centre the explanation on the systematic appropriation of an extraordinary profit by the so-called monopolistic sector (as opposed to the competitive one). This is the alleged ‘anomaly’ that violates the ‘law of value’ or the formation of a general rate of profit. In reality, not only does that sector not stand above the law of value (as critics of Monopoly Capital theory rightly argued) but, moreover, it is not the actual ‘anomaly’ to be explained. As we shall see below, the so-called ‘monopolistic’ sector is actually composed of normal, average capitals. The fact that needs explanation is precisely the opposite, namely: the systematic reproduction over time of the so-called competitive sector, which actually comprises *small* capitals, that is, capitals whose reduced magnitude prevents them from *actively* participating in the formation of the general rate of profit due to their systematic inability to keep up with the development of the productivity of labour that regulates the values of commodities and, *a fortiori*, their prices of production. To put it differently, what needs to be explained is not why certain capitals obtain an above-average rate of profit but why can some capitals

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<sup>6</sup>Here we are considering that it is adequate to treat each node in a commodity chain as a different individual branch of the division of social labour inasmuch as they produce qualitatively different use-values. The regulation of competitive relations along the chain therefore needs to be conceptualised through the determinations underlying the formation of prices of production. Thus, it is not sufficient to recognise, as Tony Smith does based on the empirical evidence offered by Kleinknecht {, 1987 #38}, that different industrial sectors obtain divergent profit rates over the course of a ‘long wave’ due to persistently uneven innovative activity and, hence, divergent the rates of growth. This is, again, an empirical fact that demands explanation. In other words, why is it that the rate of innovative activity is systematically uneven across sectors over the course of a long-wave? In our view, Smith does not provide a satisfactory answer to this question. Drawing on theoretical arguments developed by Walker {, 1988 #39}, he addresses this phenomenon by arguing that capital-commodities are exchanged at ‘prices of expanded reproduction’, that is, prices that reflect the differential rates of profit that characterise fast and slow growth sectors respectively and which differ from prices of production. But the category of ‘prices of expanded reproduction’ is just an inductive formalisation of the empirical phenomenon of diverging growth and profit rates across sectors. The latter is what needs to be explained and not simply taken as given. The distinction between normal and small capitals that we develop below can, we think, shed light on that phenomenon. Briefly put, systematically slow-growth sectors can be said to be ‘bastions’ of small capitals.

systematically obtain a below-average rate of profit without being displaced out of business.<sup>7</sup>

The GCC approach is ill-equipped to explain this phenomenon, which is so central to an object of inquiry that is partly predicated on the outsourcing by ‘chain drivers’ of manufacturing capacity to a complex, multi-tiered network of small suppliers. In effect, it is to be noted that its account of the formation and dynamics of commodity chains simply *presupposes what needs to be explained*.<sup>8</sup> Thus, the differential power among firms to appropriate profits is seen to derive from the capacity of some capitals to generate barriers to entry, which is in turn premised on their relative monopoly over some strategic ‘scarce asset’, i.e. one which expresses the capacity to actively participate in the development of the forces of production. But surely the determination of those assets as relatively ‘scarce’ presupposes that other firms within the chain are systematically unable to have their own strategic assets, i.e. that they lack the magnitude of capital necessary to generate their own barriers to entry. Otherwise all firms along the chain would have their own ‘strategic asset’, making the possession of those assets cease to be relatively scarce, and leading to the disappearance of the material basis for the differential capacity to command the chain and appropriate higher profits. To put it differently, how is it that firms in the ‘competitive’ sector manage to reproduce themselves over prolonged periods of time despite their systematic inability to actively develop the forces of production (which ultimately is the only competitive weapon that could sustain their survival in the face of the general tendency for the concentration and centralisation of capital)? GCC analysis simply *assumes* the power differential among capitals (i.e. the existence of small capitals) and then ‘explains’ the emergence and dynamics of commodity chains on the basis of it as the strategic choice made by lead firms through which they arbitrarily impose the particular conditions for the circulation (hence valorisation) of all other capitals along the chain. But although this might be descriptively accurate, it

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<sup>7</sup> Although, as we shall see, there are reasons why some capitals will obtain, *as an expression of the law of formation of the general rate of profit*, systematically above-average rates of profit.

<sup>8</sup> This is the real theoretical shortcoming in the GCC approach and not, as Raikes et al. state {, 2000 #12, p. 401}, the *circularity* of the argument. There is nothing circular in claiming that profits are explained by power since, from the very start, GCC analysts were aware that power was not *defined* in terms of high profits but was rather *expressed* in that greater profitability. The material basis of that power was seen to reside in the relative monopoly over scarce assets. The content of the power of lead firms was always seen by Gereffi, as Raikes et al. recognise a few lines after the accusation of circularity, as the capacity to shape the conditions of valorisation of capital along the whole chain (‘market power’) with the ultimate aim, of course, of maximising its own rate of profit, which is the only purpose of capitalist production.

simply presupposes that all other capitals *do not* have the power to contest that organisational leadership and will therefore have no choice but submissively to accept to valorise at a lower rate of profit. This inability to provide a sound explanation of its very object of inquiry does not only characterise the initial formulations of the GCC paradigm as it emerged out of World-System research. As we shall see below, it can be also found in its more recent formulations in a neo-Schumpeterian and Management/Industrial Organisation theory guises.

*From Schumpeterian dynamics of capitalist competition to Industrial Organisation/Management approaches*

It should come as no surprise that the difficulties fully to explain the constitution and dynamics of commodity chains just highlighted have been carried over to the neo-Schumpeterian versions of GCC research. The reason for this is that, as Guerrero {, 1995 #36} notes, Schumpeter's view of capitalist competition as a dynamic process based on a fierce rivalry among all individual capitals (including, or rather, especially the more concentrated ones) formally resembles the Marxist view espoused by critics of Monopoly Capital theories that we commented on above.<sup>9</sup> However, unlike the latter group of scholars who simply explain away the phenomenon of the differentiation of valorisation powers of individual capitals, GCC researchers obviously think that their own general approach derived from Schumpeter actually provides solid foundations for that particular configuration of capitalist competition. However, we shall argue that it does not.

A recent contribution by Kaplinsky {, 2000 #5; see also \Kaplinsky, 1998 #40} offers a rather illustrative and telling case in point. This paper is quite interesting for various reasons. First, Kaplinsky is one of the few economists involved in GCC

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<sup>9</sup> While Guerrero does mention some differences between Marx's and Schumpeter's view of capitalist competition, he forgets to mention the essential one. For Schumpeter, the competition among individual capitals is a contentless form that *exhausts* the reality of the dynamics of capitalist development. For Marx, competition among individual capitals is the form through which their unity as private aliquot parts of the total social capital is achieved {Iñigo Carrera, 1995 #46; Arthur, 2002 #42; Robles Báez, 2005 #47}. The latter is the actual concrete subject of the accumulation process. That is why only the Marxian critique of political economy is capable of explaining the determination of the precise level of the general rate of profit, which can only be grasped at the level of social capital {Moseley, 1997 #41; Moseley, 2002 #48}. See Bellofiore {, 1985 #44} and Smith {, 2004 #45} for other comparisons between Marx and Schumpeter and Marx and the neo- Schumpeterians respectively.

research.<sup>10</sup> Secondly, unlike the meso and micro focus of most GCC studies, he explicitly attempts to ground that paradigm in a more systematic analysis of the general economic dynamics of the capitalist system as a whole. Thirdly, and more important for the purpose of our discussion, it reveals with utmost clarity the inconsistency between the postulated general economic law regulating the system-wide dynamics of capital accumulation and the empirical phenomenon of GCCs. The two aspects of the question at stake uneasily co-exist in different sections of the same general presentation of the main tenets of the GVC approach, without the inconsistency being even acknowledged. Thus, Kaplinsky starts out his discussion with a presentation of the dynamics of capitalist competition mainly based on Schumpeter's *The Theory of Economic Development* {, 1961 #51}. According to this view, what drives capitalism forward is the innovation process carried out by 'entrepreneurs' as they search for 'new combinations', which in turn allow them to socially construct temporary barriers to entry and therefore appropriate surplus profits or producer rents {Kaplinsky, 2000 #5, p. 123}. These rents are however dynamic, being eroded by the process of competition which leads other 'entrepreneurs' to replicate the original innovator (the diffusion process), thus revealing the temporary nature of barriers to entry and hence driving the rate of profit down to its industry equilibrium level defined by the average rate of profit {Kaplinsky, 1998 #40, p. 10}. This erosion of extraordinary profits does not put the dynamism of capitalism to a halt, and actually acts as a trigger for the further search of 'new combinations' as capitalists try to escape the 'tyranny of the normal rate of profit' {Kaplinsky, 2000 #5, p. 123}. This dynamic competition process in which the establishment of a 'normal rate of profit' is achieved through the deviation of the concrete rate of profit obtained by innovating capitals from the norm, constitutes the general economic law of motion of the system according to this Schumpeterian view of capitalist development. Important for our purposes is to note that although this perspective does consider that the equalisation of the rate of profit is not the empirical situation at any particular point in time, it is nonetheless the underlying tendency that governs the movement of capitalist competition. Thus, nothing in this account leads to a systematic differentiation of the concrete rates of valorisation of individual capitals. And yet, right after laying out these general Schumpeterian foundations for the dynamics of

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<sup>10</sup> See also Heintz {, 2006 #50}, who provides a formal economic model of BDCCs.

capitalist competition, and without any further mediation, Kaplinsky moves to the discussion of the governance structure of commodity chains and the consequent hierarchy of valorisation capacities that runs along the different nodes of the chain, with the most powerful participants as key agents that systematically have greater capacities for generating ‘economic rents’ (i.e. higher rates of profit). He even illustrates this with some case studies empirically showing the breakdown of the total value added into the percentage of value ‘captured’ by each node. But this stands in blatant contradiction with what his previous discussion of the general economic law stated, namely: that the valorisation of *all* capitals is, *on average*, governed by the normal rate of profit that acts as the ‘centre of gravity’ for the empirical rates of profit.<sup>11</sup> Surely, he attempts to ground the differentiation of valorisation capacities characteristic of GCCs in the exclusive possession of ‘scarce assets’ by lead firms. But this simply analytically displaces the phenomenon to be explained one step further. For why is it that certain capitals systematically have the potentiality to appropriate scarce assets whilst others have no access to those means of capitalist competition?

The recent shift to a meso/micro level of analysis reported by Bair {, 2005 #6} in her survey of the intellectual evolution of the GCC paradigm (through the incorporation of insights from the new economic sociology and Management/Industrial Organisation theory literature), does not do much to resolve

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<sup>11</sup> Two points should be mentioned in relation to the question of empirical quantitative evidence of differential profitability in GCCs. First, as Raikes et al. note {, 2000 #12, p. 403}, despite the claims about the hierarchy of profitability along the chain, GCC analysts seldom demonstrate with rigorous quantitative empirical evidence that the profits in some parts of the chain are higher than in others. Secondly, the kind of quantitative evidence provided by Kaplinsky based on share of value added in each node of the chain is not a meaningful measure of each individual capital’s valorisation capacity (i.e. their profitability), and falls into the mislabelling of the rate of profit about which Hopkins and Wallerstein complained that we mentioned above. But neither are profit margins, the measure preferred by Raikes et al. {, 2000 #12, p. 403}. Profit margins as a measure of the individual capital’s degree of valorisation obliterate the distinction between *advanced* and *consumed* capital and are therefore impotent to capture the organic unity of the rotation of capital and its effects on profitability. The only meaningful synthetic expression of the rate of valorisation of individual capitals – and hence of their accumulation power - is the annual rate of profit, measured as the magnitude of appropriated surplus value in relation to the total capital *advanced* (different from the total capital *consumed*). Although it certainly involves a laborious and difficult process, it is not impossible to estimate empirically as Raikes et al. claim {, 2000 #12, p. 403}. See Iñigo Carrera {, 1998 #52} for a model to estimate the concrete rate of profit of individual capitals based on the determinations of the turnover circuit of capital, which also develops a critique of the different mainstream attempts at measuring the profitability of individual capitals. This is not a matter of subtleties but is a crucial aspect in a phenomenon like GCCs, where one of the fundamental concrete forms in which ‘lead firms’ shape the conditions of valorisation of other capitals along the chain is precisely through the imposition of differential turnover structures upon its suppliers (by means of ‘just in time’ arrangements with unequal distribution of risks and burdens, terms and conditions of financial and commercial credit, etc.).

these difficulties. In actual fact, one could argue that the narrower focus on the more proximate or immediate *manifestations* of the immanent causes of the constitution and dynamics of commodity chains, represents the capitulation before the need to give a solid foundation to the formation of GCCs based on the general ‘macro’ dynamics of the capitalist economy. As mentioned above, the main thrust of this more recent research has been to refine the descriptive accuracy of different forms of governance beyond the rather simplistic dichotomy between BDCCs and PDCCs.<sup>12</sup> This has been done by giving attention to two concepts that had been central to economic sociology, organisation studies and strategic management at least since the 1980s: ‘networks’ and ‘embeddedness’ {Hess, 2006 #53}. The idea is that economic transactions are not carried out in an abstract social space by atomised individuals (as in mainstream economic theory and its derivatives like the transaction costs economics approach associated with Oliver Williamson, but are embedded in networks of concrete personal social relations based on trust, reputation and power. Thus, instead of attempting to ground the research on GCCs into a more adequate comprehension of the general dynamics of the capitalist economy, the reaction of GCC analysts went in the exact opposite direction, that is, the search for stronger ‘micro-foundations’ of their approach in order to understand differential ‘market power’ and how it changes over time - a need that had been highlighted by Raikes et al. {, 2000 #12, p. 402}. Whilst there is no doubt that this has led to a *descriptively* richer typology of types of governance, this move did little to resolve the difficulties that we raised above regarding the provision of a proper *explanation* of GCCs.

Thus, the ‘formal theory of governance structures’ developed by Gereffi, Humphrey and Sturgeon, is no more than an identification of the particular *technical and organisational* conditions within each industry that need to be present in a certain degree (high or low) for a kind of governance structure to be materially *feasible*. But this offers little insight into the *immanent social determinations* that could actually *drive* the emergence of particular modalities of chain governance. To indicate that in order for lead firms to outsource manufacturing the suppliers need to have the capabilities to perform that and other associated productive functions might be true, but close to a truism. It is analogous to trying to explain the ‘New International

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<sup>12</sup> Ponte and Gibbon {, 2005 #54} have contributed to this debate on governance by highlighting the importance of distinguishing between ‘immediate’ forms of co-ordination in each node of a chain and the latter’s overall governance. They have resorted to convention theory to make their case.

Division of Labour’ or ‘Globalisation’ solely in terms of the latest technological advances in means of communication and transport. But this says little about the specifically *social* processes that shape the changing dynamics of chains over time. Gereffi, Humphrey and Sturgeon are aware that they have to do more than generate a more accurate typology of different forms of inter-firm co-ordination and that they need elements to anticipate *change* in global value chains {, 2005 #17, p. 90}. However, they attempt to do this not by means of strengthening the theoretical comprehension of the more general *social* foundations of the phenomenon under investigation but through empirical case studies that ‘shows us how governance structures evolve over time’ {Gereffi, 2005 #17, p. 90}. In a nutshell, empiricism becomes a substitute for proper critical thought.

In light of all this, it seems to me that rather than sharpening the ‘micro-foundations’ of GCCs, the way forward actually lies in searching for firmer ‘*macro-foundations*’ of this novel form of capitalist competition. This is not simply a question of bringing into the picture the broader ‘institutional framework’ shaping the dynamics of GCC as some scholars have claimed {cf. \Hess, 2006 #53, p. 1196}; for instance, by paying greater attention to the role of the state {cf. \Smith, 2002 #55}. Fundamentally, as Bair notes in setting an agenda for a second generation of commodity chains research, this involves devoting more attention to the ‘structural properties’ of contemporary capitalism {Bair, 2005 #6, p. 170}. However, for reasons spelled out above, I do not think that a recovery of the World-Systems origins of the GCC framework provides a fruitful alternative. Rather, I would like to suggest that a return to Marx’s critique of political economy can prove more illuminating for the comprehension of the nature of GCCs.

#### **4. The Law of Value and GCCs: general issues**

In a recent critical survey on the global production of uneven development, Marcus Taylor {, 2007 #9} develops one of the few attempts to conceptualise GCCs from the perspective of the Marxian critique of political economy. As he notes, this endeavour requires us to rethink the precise relation between those embedded economic activities that GCC research so vividly describes and the more general global dynamics of capital accumulation. ‘Embedded’ social relations, Taylor rightly points out, cannot be understood as self-subsistent constellations but as moments in a

circuit of capital spanning production and circulation {Taylor, 2007 #9, p. 10}. However, I do not agree that the way to grasp this process is to conceptualise it as a dynamic whereby ‘socially embedded economic activities undergo a repeated process of abstraction and re-embedding within the context of global capitalism’ {Taylor, 2007 #9, p. 10}.<sup>13</sup> Moreover, Taylor does not offer much in terms of an analysis of the particular determinations that can explain the way in which forms of inter-firm explicit co-ordination (‘embeddedness’) are subsumed under the global movement of capital as a whole (the law of value or, in his parlance, ‘social abstraction’). Thus, in commenting on the vertical disintegration of production, Taylor unproblematically *assumes* that some firms like Nike ‘are be able to shelter themselves from the pressures of abstraction by embedding themselves as the lead player in a network of outsourced firms’ {Taylor, 2007 #9, p. 12}. But, as already argued at some length above, this differential valorisation capacity of some capitals is precisely what the process of ‘social abstraction’ through the law of value should explain.

Rather than the encounter between ‘social abstraction’ and ‘social embedding’, I think that at stake is the relation between the *indirect* nature of the *general* social relation that regulates capitalist production, i.e. the self-expansion of capital on an ever increasing scale through the unfolding of the ‘law of value’, and the varied *direct social relations* through which the establishment of the unity of the former is eventually *mediated at particular* nodes of social division of labour, e.g. relatively enduring relations of power or mutual co-operation between particular individual capitals within a chain (i.e. ‘embeddeness’ and ‘networks’). The problem with the GCC approach is that it does not grasp the relations among individual capitals beyond their immediate concrete forms. It is thereby unable to uncover the *content* of the phenomenon under investigation behind its *outward manifestations* and actually inverts the latter into the very cause of the phenomenon itself. Thus, it sees the constitution of commodity chains as simply governed by *direct* social relations.

By contrast, I would like to argue that those direct social relations are the concrete mediations of the inner laws regulating the essentially *indirect* social relations among individual capitals: the process of competition through which the

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<sup>13</sup> Taylor makes what seems to me a misleading analogy between the pair ‘embeddedness’/‘social abstraction’ and the two-fold character of labour (concrete and abstract labour respectively). This, I think, misconstrues the meaning of ‘embeddedness’ in economic sociology. That concept has nothing to do with the contradictory unity between materiality and social form, but with the contrast between the depiction of economic transactions as impersonal and transitory (as in mainstream economics) and their conceptualisation as grounded in everyday personal social interaction.

formation of general rate of profit asserts itself. This is far from being a minor point. In effect, as Marx demonstrated through the so-called ‘transformation problem’, the formation of the general rate of profit is the concrete form through which individual capitals assert their class unity as ‘aliquot parts’ of the total social capital {Marx, 1981 #57, pp. 298-300, 312}. The latter is the actual concrete subject of the process of capital accumulation, which is global in substance and national only in form {Marx, 1973 #58, pp. 227-228; Iñigo Carrera, 2003 #59, p. 134}. This means that it is ‘the self-valorisation of value’ on a global scale, or accumulation on the level of ‘total social capital’, that constitutes the immanent end in the world market {Smith, 2006 #60, p. 193} and that therefore *socially or formally* mediates the changing forms of *functional/material integration* of the different nodes in the global division of labour in each industrial sector. Hence, the representation of the relations among individual capitals within a commodity chain as being *essentially* based on command/co-operation, leads to the inability to comprehend the underlying unity of the process of capitalist competition and its inner laws and, therefore, to the impossibility to connect the *particular* dimensions of GCCs (including the embedded or direct social relations that mediate the material interdependency among its participants) with the *general* dynamics of the ‘system as a whole’. The intellectual challenge, then, is to comprehend the *differentiation* of the valorisation capacities of individual capitals along the chain as an expression of the global unfolding of the ‘law of value’, i.e. through the formation of the general ‘world market rate of profit’ {Bonefeld, 2006 #61, p. 51}. More concretely, the following two questions need to be addressed:

- 1) Why does the very operation of the law of value lead to the production and systematic reproduction of capitals of different valorisation capacities (i.e. rates of profit)?
- 2) Why does that process of differentiation of capitals, albeit the product of the laws regulating the essentially indirect social relations of capitalist production, take concrete form through the mediation of those direct relations among individual capitals characteristic of commodity chains?

In the next section, I sketch out some elements for the answer to these two questions based on Marx's critique of political economy.

## **5. The formation of the general rate of profit and the differentiation of the valorisation capacities of individual capitals**

In *Capital* Marx develops the inner determinations regulating the competition among individual capitals through his discussion of the formation of general rate of profit and the 'transformation of values into prices of production'.<sup>14</sup> As Marx argues in those pages, the *formation* of the *general* rate of profit takes the concrete form of a tendential *equalisation* of *average* rates of profits across the different branches of industry.<sup>15</sup> This would seem to leave us disarmed in the face of the central feature of GCCs that needs to be explained: the configuration of chains with capitals of different profitability and under the overall command of a lead firm that systematically appropriates extraordinarily high profits.

And yet I do not think that this should be the end of the story, a fatal blow for the potentiality of the critique of political economy to make sense of the contemporary forms taken by global capitalist competition captured by the GCC literature. Drawing on the work of Iñigo Carrera {Iñigo Carrera, 2003 #59, chapter 5}, I would like to argue that what Marx provides in those pages is the *simpler* or *more abstract* form taken by the formation of the general rate of profit. The affirmation of the unity of social capital through the determination of its private fragments as 'equally valorised values' {Iñigo Carrera, 1995 #46} is further realised in the form of its self-negation, that is, by differentiating their valorisation capacities. Here it is important to emphasise that this process of differentiation does not constitute, as monopoly capital theories would have it, the absolute opposite of the formation of a general rate of profit as the fundamental law regulating the relation between individual capitals. Instead, it involves a further concretisation of that very same law. The key to these more concrete determinations, however, are not to be found where Marx explicitly addresses the competition among the multiplicity of capitals

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<sup>14</sup> Prices of production of commodities can be resolved into cost prices (i.e. the cost of 'inputs' – labour power and means of production, including the depreciation of fixed capital), plus the normal profits of capital (the average rate of profit on the *total* capital advanced for its production). See Marx {, 1981 #57, pp. 257-258}.

<sup>15</sup> On the fundamental difference between the general rate of profit and the average rate of profit, see Robles Báez {, 2005 #47} and Arthur {, 2002 #42}.

comprising the total capital of society. But they can be found several pages later in Volume III of *Capital* itself. Specifically, Marx hints at this problem in the context of his discussion of the genesis of capitalist ground-rent.

### *The differentiation of capital in agriculture*

The main focus of Marx's discussion in those pages is the concrete form taken by ground-rent when property over land does not take the simple form of capitalist private property {Marx, 1981 #57, pp. 940ff}. Of particular interest to our discussion here is the subsection on small-scale peasant ownership. The gist of the exposition is to show that, in those circumstances where 'the peasant is the free proprietor of his land (...) rent does not appear as a separate form of surplus-value' {Marx, 1981 #57, p. 940}. We cannot go into the detail of all the implications of this concrete form assumed by ground-rent. Rather, we would like to highlight a number of points that Marx makes in the course of his presentation which are extremely relevant for the comprehension of the determinations behind the formation of commodity chains:

- First, Marx refers to those producers as a 'small capitalist', whose specificity resides in that her 'exploitation is not limited by the average profit on capital' {Marx, 1981 #57, p. 941}. In other words, Marx argues that the concrete form taken by the law that regulates the valorisation of 'small capitals' is *not* the (tendential) equalisation of their rates of profit at a normal or general level. It is to be noted here that Marx refers to these capitals as petty or small vis-à-vis *normal or average* capitals. That is, he is not contrasting 'competitive' capitals in agriculture with unusually 'big' capitals (as implied by theories of monopoly capital).
- Secondly, Marx spells out the alternative concrete forms taken by the regulation of the valorisation of 'small capitals'. There are basically two cases here. The 'absolute barrier' is given by the equivalent of the 'wage' that the peasant pays himself 'after deducting his actual expenses' {Marx, 1981 #57, p. 942}. However, Marx immediately clarifies that it is very likely that another barrier emerges which increases the rate at which small agrarian capitals must valorise, namely: 'the interest on the price of land (...) to be paid over to a third party, the mortgagee'

{Marx, 1981 #57, p. 942}. The social substance of this interest and of the rent anticipated in the price of land is, of course, ‘the surplus labour that under capitalist conditions would form the profit’ {Marx, 1981 #57, p. 942}. But, and this is the fundamental point here, this surplus labour ‘does not have to be realized in a portion of commodity value equal to the entire average profit, and still less in an excess above the surplus labour realized in the average profit, i.e. a surplus-profit’ {Marx, 1981 #57, p. 942}.

- Finally, this different regulation of the rate of valorisation of small capitals results in different forms taken by the transformed mode of existence of the value of those commodities as the products of capital. In the words of Marx, ‘it is not necessary for the market price to rise either to the value of his product or to its price of production’ {Marx, 1981 #57, p. 942}.

In sum, Marx’s discussion of small peasant ownership sheds light on the following concrete forms taken by the motion of the total social capital: the differentiation of individual capitals into normal and small capitals, the specific determinations regulating the valorisation of the latter and, finally, how those determinations are realised through a distinct transformation of the value of those commodities into a modified price-form. Now, whilst Marx only unfolds those determinations in the specific context of agrarian capital (i.e. industrial capital valorised in agriculture) the aforementioned work of Iñigo Carrera insightfully shows that their applicability is broader and can actually be generalised to industrial capital as a whole. Moreover, this author draws additional implications from the reproduction of small capitals which, I believe, cast further light on the constitution of commodity chains.

### *The differentiation of industrial capital in general*

As have been forcefully argued by many Marxist scholars {Guerrero, 1995 #36; Weeks, 2001 #62; Shaikh, 2006 #31}, the dynamics of capitalist competition that mediate the production of relative surplus-value by the total social capital is not the judicious and orderly social process ideologically presented by neo-classical economics. Rather, it is marked by a fierce warfare that results in the uneven

development of the productive forces within and across branches of production. Individual capitals that cannot keep up with the demands of the competitive battle (essentially and ultimately – though not exclusively - revolving around the increase of the productivity of labour), eventually face bankruptcy and displacement from the market. This is the concrete form that mediates the process of concentration and centralisation of capital that Marx emphasised as characterising the dynamics of the accumulation of capital through the production of relative surplus value {Marx, 1976 #56, pp. 776-777}. However, as Iñigo Carrera points out {, 2003 #59, p. 124}, this process does not necessarily take the simple form portrayed by Marx. In effect, the liquidation of individual capitals that are unable to keep up with the concentration of capital needed to set into motion the socially normal methods of production (i.e. to function as *normal or average* capitals) does not have to be the immediate outcome of their defeat in the competitive struggle. Besides the recourse to other temporary sources of competitiveness like the abnormal extension of the working-day or intensification of labour {Clarke, 1999 #63}, there are still other ways in which they can extend their agony. The key to this expanded life-span lies in the determinations of *small* capitals that we unfolded in the previous section.

In effect, we have seen that the valorisation of agricultural small capitals is not regulated by the average rate of profit of normal capitals. Instead, it is regulated either by the value of the means of subsistence needed for the material reproduction of the peasant or, additionally, by the interest paid on the price of land. This differential valorisation capacity can be generalised for all industrial capitals in general. In this case, only in very extreme circumstances will the rate of valorisation fall down to the equivalent of the wage that the small capitalist receives (i.e., the case of the family business whose owner is on the verge of proletarianisation). More generally, the rate of valorisation of small capitals in non-agricultural branches of production is usually regulated by the interest rate on the liquidation value of the productive assets of small capitals {Iñigo Carrera, 2003 #59, p. 124}. In other words, their valorisation capacity is determined by the rate of interest that those capitals of restricted magnitude could yield if they closed down business and were turned into interest-bearing capitals. Accordingly, this rate of valorisation will vary with the specific concrete magnitude of different small capital, since the aforementioned rate of interest will vary in each case. Small capitals actually constitute a stratification of capitals of different magnitudes, some of which might only *slightly* differ from normal capitals, to the

point of being imperceptible through impressionistic observation {Iñigo Carrera, 2003 #59, p. 124}. This means that, at first sight, some small capitals can look impressively 'big'. The point is that they nonetheless do not reach the *specific magnitude* needed to be turned into normal capitals, that is, they do not reach the 'definite minimum of capital [that] is required in each line of business to produce commodities at their price of production' {Marx, 1981 #57, p. 843}.<sup>16</sup>

Now, the crucial point for this discussion is the following: if, as is likely to be the case, *the rate of interest tends to be below the general rate of profit, then the higher costs springing from the smaller scale and/or the obsolete means of production used could be compensated by the lower rate of profit.* The limit to the survival of small capitals is thereby given by the extent to which the price regulating their valorisation (determined by their cost price plus the interest rate on the liquidation value of their respective assets) manages not to rise above the price of production regulating the valorisation of normal capitals.<sup>17</sup> This strictly determined limit is therefore subject to the general development of the productivity of labour in each particular branch of industry, which in turn expresses the changing pace and forms of production of relative surplus-value by the total social capital. Moreover, as the concentration and centralisation of capital nonetheless marches forward, the limit for the subsistence of small capitals - and so the sum of money that can be transformed into a small industrial capital - moves continuously upwards over time. But as long as the pace of the increase of the productivity of labour determines a normal price of production that does not fall below the price that regulates the valorisation of small capitals, the latter can continue accumulating despite their inability to keep up with the development of the capitalist productive forces due to their reduced magnitude.

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<sup>16</sup> I am indebted to Juan Iñigo Carrera for bringing this quote from Volume III of *Capital* to my attention. The determination of a specific magnitude necessary for money to be turned into normal capital is a further concretisation of that referred to by Marx when discussing the more general case of the simple transformation of money into capital as such {Marx, 1976 #56, p. 423}. As Marx notes in those pages referring approvingly to Hegel, this is a case of a quantitative difference (however small) turning into a qualitative one. See Veraza {, 1987 #64}, for an elaboration of the importance of this notion of a unity between quality and quantity in the determination of money-as-capital. Its dynamic of growth with the progress of capitalist production is mentioned in passing by Marx when discussing the law of accumulation and its expression in the tendency towards the concentration of capital {Marx, 1976 #56, p. 777}. However, in those passages he seemed to assume that the disappearance of small capitals is the more or less immediate outcome of capitalist competition.

<sup>17</sup> This is the underlying general reason for the competitive success of the so-called 'Small and Medium Enterprises' (SMEs). See You {, 1995 #65}, for a general survey of small firms in conventional (both mainstream and heterodox) economic theory, whose varied explanations contrast with the one offered here.

In fact, *if the price that regulates the valorisation of small capitals is actually lower than the normal price of production that regulates the valorisation of normal or average capitals, the latter become effectively excluded from those branches of production.* What we effectively have here is an ‘entry barrier’ for normal capitals, which are unable to compete with smaller capitals that set into motion a lower productivity of labour but which compensate those higher costs through a considerably lower rate of profit. And this has fundamental consequences for the development of the productive forces of social labour and, hence, for the realisation of the only world-historical reason to be of the capitalist mode of production. To put it simply, since small capitals are by nature impotent to be *at the vanguard* of technological development, their reproduction and dominance in whole branches of production acts as a reactionary barrier for the unfolding of the plenitude of the potentialities of the revolutionary transformation of the material conditions of social labour through the automation process.<sup>18</sup>

The reproduction of small capitals has another implication which is crucial for the comprehension of the formation of commodity chains: the release of surplus value by small capitals {Iñigo Carrera, 2003 #59, pp. 126ff}. If concrete circumstances are such that small capitals manage to sell their commodities at a price stands *above* the one determined by their specific rate of valorisation but *below* the price of production of normal capitals, then a potential surplus profit emerges.<sup>19</sup> However, although this surplus profit is borne by the commodities produced by small capitals, their competition over that extraordinary mass of abstract social wealth eventually leads them to expand production and drives their prices down to level determined by their

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<sup>18</sup> If we leave aside intrinsic technical difficulties peculiar to certain labour processes - e.g. the complexity involved in the replacement of the subtlety of the movements of the human hand in the sewing phase of the apparel industry, which has been remarkably recalcitrant to automation and mechanisation. See Dicken {, 2003 #1, p. 335} -, one could argue that this determination constitutes the true determinant for the slower pace of the innovation process in some industries noted by Tony Smith that we discussed above. On the other hand, this does not mean that no innovation at all is possible by small capitals (especially for those at the higher end of the multi-layered stratification of magnitudes comprising this category). The point is that whilst these capitals might be able at some point to approach the innovation frontier (in some products), they not only reach that point with a time lag, but also lack the potentiality actively to drive it further forward or at least not at the pace that a normal capital would do (See Hobday et al. {, 2004 #66}, for a recent empirical study of the limits to current capabilities of Korean firms). This implies that even when they reach the innovation frontier they are still retarding the development of the productive forces, since the technologies used would probably be different were normal capitals in their place.

<sup>19</sup> This surplus profit, it is to be emphasised, does not arise out of the development of the productive forces of society. Quite to the contrary, it is the product of its very negation through the reproduction of small capitals.

specific rate of valorisation. Does this mean that the surplus profit vanishes into thin air? Certainly not. Although it slips through the fingers of small capitals, it ends up in the hands of some of the normal capitals that valorise in directly neighbouring branches of the division of labour and with which they relate in the sphere of circulation. Assuming, for the sake of the argument, that small capitals are suppliers of inputs for those normal capitals, the latter will benefit from a permanent flow of extra surplus value derived from the purchase of inputs at prices below their normal price of production. In turn, this means that those successful average capitals that end up monopolising the market relation with small suppliers, will systematically obtain a *higher than normal* rate of profit.

The differentiation of industrial capital in general into normal and small individual capitals is not the sole basis for the systematic valorisation of some firms at extraordinarily high rate of profits. The capitalist expansion of the division of social labour produced by the increasing complexity of the production process of large-scale industry generates another locus of differentiation of valorisation capacities through the specialisation of some capitals in the production of technical innovations themselves {Iñigo Carrera, 2003 #59, p. 132}. These are not capitals that specialise simply in the production of machinery.<sup>20</sup> They are capitals whose very function in the social division of labour consists in the research and development of product and/or process innovations, which thereby becomes formally independent from the manufacturing of machinery or final products itself. The production cycle of these capitals thus *continuously* results in a use-value that materially bears the potentiality of increasing the productivity of labour (or of producing an improved use-value on the basis of at least the same unit costs as before – i.e. ‘product differentiation’) and, hence, of appropriating surplus profits through innovation {Iñigo Carrera, 2003 #59, p. 133}.<sup>21</sup> On these foundations, these capitals become *permanently* entitled to a

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<sup>20</sup> As they produce the immediate material conditions for the increase in the productivity of labour, those capitals that produce machinery are entitled to the appropriation of a portion of their buyers’ surplus profits from innovation. The latter will be happy to incur that additional cost as long as they can still sell their commodity at a price that stands above their individual price of production but below the socially determined one for that branch. However, that surplus profit will be as temporary as is its general source.

<sup>21</sup> The separation between product and process innovation is mainly analytical since they are most likely to go together in reality. More importantly, the idea that competition over quality involves the absolute opposite of, and has actually replaced, cost-based competition has no bearing in reality. As Guerrero {, 1995 #36} points out, capitalist competition has always involved the two-fold aspect of quality and costs. Moreover, it should be borne in mind that the strategy of reducing unit production costs through the increase in the productivity of labour is formally ‘equivalent to improve the quantity

continuous inflow of a portion of the surplus profits from innovation directly obtained by capitals operating further downstream in the division of labour.

What are the implications of all these further mediations in the concrete forms taken by the competition among individual capitals that Iñigo Carrera developed beyond the simple equalisation of the average rates of profit described by Marx? In a nutshell, we can now see that the unfolding of the intra-capitalist competitive battle generates a four-fold differentiation among individual capitals. First, there are *normal or average capitals* whose rate of profit is tendentially equalised at the level of the general rate of profit. Secondly, there are *small capitals*, the losers in the competitive war that nonetheless manage to extend their life-span through the systematic valorisation at a rate of profit below the general one. Thirdly, there are some normal capitals that, through the appropriation of the surplus profit freed up by small capitals, systematically valorise at higher than average concrete rates of profit. We shall term these latter kind of individual capital *enhanced normal capital*. Finally, as the complexity of the division of labour into particular branches increases, some capitals specialise in the production of technological innovations, which grants them an ever renewed access to the appropriation of part of the surplus profits of its buyers. We shall call these *innovation-producing capitals*. These capitals also obtain a systematically higher than normal rate of profit but without obstructing the development of the productivity of social labour.

In brief, a hierarchy of individual capitals with differential valorisation powers emerges out of the immanent dynamics of competition that mediate the establishment of the unity of social capital as the concrete subject of the exploitation of the collective labourer. Two important points should be emphasised in this regard. First, this is not simply a short-term phenomenon but can reproduce itself over relatively long periods of time. Still, this differentiation cannot persist indefinitely as the aforementioned objective limits to the reproduction of small capitals are reached, on the one hand, and the tendency for the concentration and centralisation of capital eventually leads to the vertical re-integration of innovation and manufacturing on an ever greater scale than through specialisation, on the other. The precise forms and timing of its internal dynamics ultimately depend on the pace of the contradictory development of the productive forces of social labour as an attribute of the total social

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and/or quality of use-value per unit of exchange-value (that is, given the cost or price of the product)' {Guerrero, 1995 #36, p. 47}.

capital, i.e. on the concrete forms taken by the production of relative surplus value on a world scale in the course of capitalist development.

Secondly, this hierarchical differentiation of capital does not derive from, or result in, the suspension or transcendence of the general law regulating the competition process, i.e. the capitalist law of value or the formation of the general rate of profit, through the emergence of a ‘monopoly sector’ that stands above and dominates a ‘competitive’ one. Quite to the contrary, as we hope to have shown, it is the concrete expression of the pure unfolding of the formation of the general rate of profit beyond its *simpler* forms (the ones discussed by Marx in *Capital*). The law of value continues to operate with full force across the whole capitalist economy. Thus, the power relations among individual capitals are not the *cause* of their differential valorisation capacities. *It is the other way round*: because the law regulating the competition process – the formation of the general rate of profit - takes concrete shape through the differentiation of the concrete valorisation capacities of each kind of individual capital, the indirect social nexus among the latter is expressed through unequal or hierarchical relations (i.e. direct social relations). In this sense, the differentiation of capitals is a more mediated form in which individual capitals assert their unity as aliquot parts of the concrete subject of the accumulation process: the total social capital. This means that although the establishment of the concrete rate of profit of each capital in the chain is mediated by their respective possession of power in the sphere of circulation (thereby *appearing* as the immediate outcome of those unequal market relations), it is actually strictly determined in accordance to the laws of movement of capital as whole. This does not only apply to normal capitals whose rate of profit tendentially equalises at the level of the rate of profit of the total social capital, but to the varied spectrum of small capitals as well. As we have seen, their rate of profit is not lacking in objective determination but gravitates towards the rate of interest on the liquidation value of their assets. In the next section, we show that it is this process of capital differentiation and its dynamics that constitutes the general determination behind the formation and changing configuration of GCCs.

## **5. Re-framing GCCs in the light of the critique of political economy**

After what might have seemed as a long-drawn diversion, let us now sketch out the relevance of the determinations discussed above for the comprehension of the configuration and dynamics of GCC. The following two dimensions can be considered.

### *The genesis and structure of GCCs*

Behind the different particular motives usually adduced by scholars for the formation of GCCs {e.g. taking advantage not only of foreign cheap labour, but also of ‘organisational flexibility’ \Gereffi, 1994 #27, p. 6}, I think there is a more general inner content underlying this novel social phenomenon, namely: commodity chains essentially are the social form through which certain normal capitals appropriate the surplus-value released by small capitals.

The *formation* of commodity chains is therefore the concrete modality taken by the competition among normal or average capitals over the extra surplus-value that escapes the hands of small capitals. The deeper *immanent purpose* and *prime-mover* of the outsourcing of manufacturing is therefore the *multiplication* of the sources of extra surplus-value released by small capitals in the sphere of circulation {Iñigo Carrera, 2003 #59, p. 131}, as particular functions of the social division of labour that were formerly done ‘in-house’ and thereby actively participated in the equalisation of the general rate of profit, are now carried out outside the *immediate* reach of that social process. Similarly, ‘the contractual subordination of suppliers previously linked through “open market” transactions’ {Raikes, 2000 #12, p. 396} involves the attempt by normal capitals to secure and protect the control over the outflow of surplus-value released by particular small capitals. Thus, although it is true that one of the conscious motives for normal capitals to outsource manufacturing is the benefits to be obtained by the employment of ‘cheap labour’ in low-wage locations, this line of reasoning simply assumes that those lower costs will not (entirely) translate into higher profits for contractors but will be appropriated by ‘lead firms’. The determinations of the law of value developed in the previous section explain why this will necessarily be the case: although normal capitals are not the direct employers of those low-wage workers, they nonetheless end up appropriating part of the surplus-value that

corresponds to their exploitation.<sup>22</sup> The imposition of strict conditions for chain membership (e.g. the fixing of low prices for the suppliers' output) is the concrete form that mediates this transfer of surplus-value from small to normal capitals. The same could be said of 'organisational flexibility' which, as the Raikes et al. highlight, is flexibility *for the key agent in the chain* {, 2000 #12, p. 396}. From the perspective of the organic unity between the production and circulation of capital, 'organisational flexibility' actually entails the optimisation of the overall turnover structure of normal capitals at the expense of higher circulation costs for all other capitals in the chain (through, for instance, accumulation of inventories or unfavourable conditions of commercial credit).

To sum up, the geographically-dispersed networks of firms that constitute GCCs are a concrete instantiation of the differentiation of capitals that mediates the establishment of the unity of social production through the formation of the general rate of profit. However, since that differentiation is necessarily mediated through the concrete specific relations established in the sphere of circulation of commodities between determinate capitals of varying magnitudes and valorisation capacities, the *indirect* relations of inter-branch competition end up taking the form of their opposite: *direct* relations of command/co-operation.

The *general* determination of both the *composition* and *governance structure* of GCCs also follows from the differentiation of industrial capitals outlined above. Thus, although varying in its specifics with the particularities of each GCC (which can only be captured through detailed empirical research), it seems reasonable to suggest that all commodity chains generally comprise at least three qualitatively different kinds of capitals: enhanced normal capitals, normal capitals and small capitals. The peculiarities of the governance structure will surely vary according to the composition of the chain. Whilst relations of command/subordination will tend to prevail in nodes where exchange relations between the normal and small capitals dominate ('captive' forms of governance), more horizontal or 'co-operative' relations will tend to prevail among normal capitals and, probably, also between enhanced normal capitals and normal capitals ('modular' or 'relational' governance structures). The simple reason for this is that hierarchical relations are more likely to be the

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<sup>22</sup> As Iñigo Carrera points out, despite being the ultimate beneficiaries of the 'over-exploitation' of the workforce of small capitals, 'lead firms' can hypocritically present themselves as the champions of the now fashionable 'corporate social responsibility' {, 2003 #59, p. 63}.

concrete mediating form involved in the appropriation of an extraordinary surplus-value freed up by small capitals. The ‘lead firm’ or ‘chain driver’ in particular will most certainly be a normal capital that, presumably on the basis of its strategic material-functional role as the driving force in the overall process of production of relative surplus-value by the total social capital vis-à-vis other normal capitals in a particular industry, is in a better position to act as ‘system integrator’ {Prencipe, 2003 #68; Hobday, 2005 #67}.<sup>23</sup> From that position, it will therefore be able to capture the surplus profits freed by small capitals within that chain and become an enhanced normal capital, or the strongest among them if there are other normal capitals that successfully manage to make a claim over those extraordinary profits flowing out of small capitals.

Take, for example, the case of the apparel industry until the mid-1990s, one of the most extensively researched GCCs {Gereffi, 1999 #69; Gereffi, 2003 #70; Bair, 2006 #22} and an emblematic case of BDCC. Simplifying slightly, there are three main players in this particular chain: ‘big buyers’ (branded marketers, retailers and branded manufacturers), garment producers and textile manufacturers. Whilst textile manufacturers in the United States are large firms that use highly automated labour processes {Gereffi, 1994 #14, p. 103}, garment manufacturers are small, labour-intensive factories {Gereffi, 1994 #14, p. 102}.<sup>24</sup> ‘Big buyers’, for their part, are generally giant retailers specialising in the design, marketing and branding of commodities and having the overall leadership in the chain. As Gereffi reports, developments since the 1980s meant that garment manufacturers were being ‘squeezed’ from both ends of the apparel commodity chain by textile companies and large retailers {Gereffi, 1994 #14, p. 103}. The specificities of this dynamic seem to indicate that whilst these two kinds of capital were normal capitals, garment producers were small capitals that released some of its potential surplus-value in the sphere of circulation, which therefore became available for appropriation by the former. The role of big retailers as ‘chain drivers’ can only mean that they were capturing the larger amount of that extraordinary surplus-value through the establishment of the overall conditions of circulation of capital within the chain

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<sup>23</sup> ‘System integrator’ is an alternative label for the overall management of a network of component and subsystem suppliers by key agents in high-tech industries. These key agents are such precisely for retaining the capability to design and integrate productive systems, i.e. the division of labour within each chain.

<sup>24</sup> The situation has more recently changed with the emergence of giant contractors at the garment manufacturing level {see Appelbaum, 2006 #81}.

thereby becoming the strongest enhanced normal capital. However, the fact textile producers were placing greater demands on garment manufacturers for larger orders, high price of inputs and favourable payment schedules {Gereffi, 1994 #14, p. 103} – i.e. shaping their turnover structure –, suggests that they might have been participating in the appropriation of part of that extra surplus-value as well.<sup>25</sup>

Thus, the insights gained through the re-framing of the particularities of each GCC in the light of the more general determinations of the differentiation of the total social capital can provide more robust general foundations for the comprehension of this concrete social form. Specifically, this framework can adjust more flexibly to some of the empirical objections to the original formulation of the general features of governance structures that have been put forward in the literature. Raikes et al. {, 2000 #12, pp. 397-399}, for example, have disputed the idea of single chain driver (contemplating the possibility of ‘multi-polar driving’ or of varying degrees of ‘drivenness’ in different nodes of the chain). Ponte and Gibbon {, 2005 #54, pp. 5-6} have also taken issue with the more recent five-fold typology developed by Gereffi, Humphries and Sturgeon, claiming that the different types of governance do not necessarily reflect the overall co-ordination of a chain but can exist at different nodes of the *same* commodity chain. These objections to the over-simplistic original portrayal of the ‘governance structure’ of commodity chains can be easily and more rigorously addressed armed with the determinations of the differentiation of individual capitals and the release of surplus-value by small capitals that we discussed earlier. ‘Multi-polar driving’ would simply signal the presence of more than one normal capital enhancing its accumulation via the appropriation of an extra surplus-value from small capitals. Similarly, the existence of varying ‘degrees of drivenness’ or of diverse ‘governance modalities’ in the various links of a chain, would express the fact that there are at least three qualitatively different kinds of capitals of stratified valorisation capacities (enhanced normal capitals, normal capitals and small capitals) and that the category of small capital includes a wide spectrum of concrete magnitudes and rates of valorisation. The kind of exchange relations that mediate that process of differentiation in the sphere of circulation will differ accordingly. This

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<sup>25</sup> As already noted, a more conclusive typology would need to be based on a more rigorous quantitative measurement of the concrete annual rate of profit of each of the capitals in the chain, in turn estimated on the basis of their respective turnover structures. Only such an analysis can show with precision which capitals are normal, which are small and which among the former are participating in the appropriation of surplus-value released by the latter and in what degree.

greater complexity of ‘actually existing’ GCCs can therefore be grasped on the basis of rigorous and clear criteria reflecting the general qualitative determinations of the different kinds of capitals that emerge out of the system-wide laws of motion of social capital as a whole. By contrast, the GCC approach can only accommodate these variations by continuous *ad hoc* redefinitions and refinement of previous typologies based on inductive generalisations from particular commodity chains, i.e. by permanently chasing a moving-target.

### *The dynamics of GCCs*

The potentiality of the critique of political economy to cast light on the nature of GCCs can also be appreciated in relation to the tendencies that give diachronic unity to the transformations they undergo over time. Concerning their initial emergence, Ponte and Gibbon {, 2005 #54, p. 4} have perceptively observed against the argument that outsourcing does not only include ‘low profit’ functions and entail ‘captive’ positions for suppliers {Sturgeon, 2002 #23}, that the upgrading of externalised segments is a later phenomenon reflecting subsequent technological changes and opportunities for scale economies. At the very moment of outsourcing, those functions were indeed ‘low profit’. This should come as no surprise once we recall the general inner purpose of outsourcing by ‘lead firms’. Inasmuch as these capitals aim at the generation of ever renewed channels for the cross-branch transfer of extraordinary surplus profits released by small capitals, they will hardly outsource a function to facilitate the emergence of a normal capital. This would not only defeat the purpose of gestating the aforementioned source of surplus profits. In addition, as the so-called case of ‘Wintelism’ in the electronics industry illustrates, it could even facilitate the emergence of competitors over that extraordinary mass of social wealth that feeds their differential valorisation capacity.<sup>26</sup>

The proliferation of small capitals resulting from outsourcing can also be said to be the ‘hidden’ secret behind the competitive success of Japanese firms in the 1980s (in the automobile and electronics industries most notably) vis-à-vis the more

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<sup>26</sup> The term ‘Wintelism’ (after the brand names Windows and Intel) has been coined by researchers at the Berkeley Roundtable on the International Economy (BRIE) to refer to the competitive challenge to the leadership of final assemblers in the electronics industry posed by giant component manufacturers like Intel (processors) or Microsoft (software). See Borrus and Zysman {, 1997 #72}.

vertically-integrated American and European capitals {You, 1995 #65}. Besides the often-told story about the general efficiency gains in the turnover of capital derived from all the organisational methods associated with the so-called 'lean production' {see \Smith, 2000 #71, for an analysis of lean production based on the circuit of capital}, the competitiveness of Japanese 'lead firms' was arguably being sustained on the massive surplus profits released by the multitude of small capitals comprising the intricate multi-tiered network of captive suppliers.

And yet, the recent revival of American and European capitals from the 1990s sustained on the formation of 'modular' or 'turnkey' production networks (where there is a growing de-linking of innovation from manufacturing), evidences the fragile nature of the source of accumulation power of Japanese capitals based on the dominance of small capitals as suppliers {Sturgeon, 2002 #23; Sturgeon, 2003 #4}. This recovery have caught by surprise those scholars who assumed that American and European firms were going to loose ever more market segments in the hands of Japanese competitors by failing to adopt a 'network' model of production organisation along trust-based or co-operative lines {Sturgeon, 2002 #23}. Moreover, Sturgeon shows how the conventional theories of the firm and inter-firm relations (i.e. Chandlerian, transactions costs and economic sociology approaches) are unable to explain these recent trends in the forms of outsourcing and vertical disintegration. However, the response of GCCs analysts like Sturgeon has not been very helpful in *explaining* these transformations either. As mentioned above, it basically consists in an *ad hoc* introduction of additional governance types to cover these newer particular cases of GCC on the basis of an inductive formalisation of their features. Furthermore, GCC scholars have not offered much in terms of grasping the *general determinations* underlying the transformative tendencies that have led to this novel structure of GCCs. The diachronic passage to the constitution of a 'new global supply-base' {Sturgeon, 2003 #4} has only been accounted for through descriptive historical analysis of industrial trajectories. Once again, the strategy has been to refine the descriptive accuracy of the analysis without offering much in terms of conceptual depth. From our perspective, by contrast, these developments are far from unexpected and can be read as a predictable expression of the way in which the objective limits to the reproduction of small capitals are reached as the tendency for the concentration and centralisation of capital moves forward. Let us examine the matter more closely through the case of the electronics industry.

The recent transformations of the electronics commodity chain can be synthetically captured through the emergence of Electronics Contract Manufacturing (ECM) as the cornerstone of turnkey production networks {Sturgeon, 1997 #73; Sturgeon, 2002 #23; Lüthje, 2002 #74}. Thus, unlike the traditional subcontractors' focus on labour-intensive assembly processes or, more generally, simple OEM arrangements, these ECM companies provide brand-name firms with activities as varied as product engineering at the board and systems level, component design, process engineering, parts procurement, product fulfilment, logistics and distributions, and after-sales services and repair {Lüthje, 2002 #74, p. 229}. Moreover, they do not serve just or mainly one brand-name firm through a captive relationship but manufacture for many of them, and even from very different product markets, from personal computers and servers to communication equipment, industrial and automotive electronics, and space and aircraft electronics {Lüthje, 2002 #74, p. 229}. On this basis, these CM companies (the top five of which are based in North America) have rapidly grown into global giant corporations in their own right with production facilities dispersed worldwide {Sturgeon, 2002 #23, p. 432; see Lüthje, 2002 #74, p. 238-239, for a more detailed description of the patterns of geographical dispersion}. Accordingly, the 'balance of power' between brand-name companies and contractors has become less uneven without, however, entirely eliminating the leadership of the former.<sup>27</sup>

The development of electronics contract manufacturers is the other side of the outsourcing of an increasingly wider array of productive functions by brand-name electronics firms since the late 1980s. The latter have nonetheless retained overall leadership of the commodity chain by reasserting control over, and concentrating their efforts on, product definition, development and design {Sturgeon, 1997 #73, p. 2}. Thus, the emergence of turnkey production networks has led to both specialisation (at the top end of the division of labour in the industry) and vertical re-integration along the rest of the supply chain {Lüthje, 2002 #74, p. 233}. For brand-name companies,

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<sup>27</sup> This leadership has continued to be manifested through the ability of the 'chain driver' to shape the turnover circuit of suppliers. For instance, the contractual arrangements that organise the relationship between electronics contract manufacturers (ECMs) and their brand-name customers ('turnkey contracts') stipulate that the contractor effectively acts as lender to its buyers by purchasing and holding components inventories until products are manufactured charging only minimal mark-up on them {Sturgeon, 1998 #75, p. 7}. Moreover, customers are usually granted 30 to 60 day grace period to pay contractors for their services {Sturgeon, 1998 #75, p. 8}. In other words, ECMs provide 'lead firms' with virtually free commercial credit.

this governance structure has brought all the aforementioned benefits of outsourcing associated with the riddance of the heavy costs and risks of the immobilisation of capital entailed by manufacturing but on a larger scale. But additionally, it has allowed them to have a greater focus on product innovation, thereby enhancing their capacity to respond to shortening product cycles and increasing product complexity in a context of fierce competition within the industry. For suppliers, the contrast with the situation in more ‘captive’ forms of governance is also very pronounced. Inasmuch as these global ECM companies tend to specialise on relatively generic base processes that cut across product categories and therefore enable horizontal integration along with attendant economies of scale and scope, these global suppliers have the possibility to offset at least part of the heavy burden of the manufacturing stage with the flexibility to shift production lines accompanying the changing rhythms of demand from their broader pool of customers {Sturgeon, 2002 #23, pp. 466, 476}. This is why these global suppliers manage to combine flexibility and speed {i.e. the attributes generally seen as residing in small firms, cf. \Ernst, 2000 #76} *with* large scale {Sturgeon, 2002 #23}.<sup>28</sup> The result has been a progressive decline of smaller regional contractors in the face of the rise of these global giant manufacturers that, moreover, have sometimes absorbed those small capitals {Sturgeon, 1998 #75, p. 22}.

How to make sense of these recent trends in the configuration of commodity chains through the lenses of the critique of political economy? The answer follows quite straightforwardly once we realise that all these developments can be seen simply as concrete forms taken by the unfolding of the general tendency for the concentration and centralisation of capital. On the one hand, we have seen that it is this process that ultimately undermines the competitive edge of small capitals by increasing the productivity of labour of normal capitals to the point where their price of production sinks below the price that regulates the valorisation of the former. On the other hand, in light of the particular attributes of EMCs described by the current GCC literature summarised above, it seems reasonable to consider those contractors as normal capitals that have eventually managed to enter into (or grow within) branches of production formerly dominated by small capitals. In this sense, it is remarkable that the rise of global EMCs has been closely associated with the progress of the

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<sup>28</sup> This has been also facilitated by the ‘virtual’ turn in Information and Communication Technologies since the mid-1990s that increased the efficiency of the management of large-scale, globally dispersed and organisationally-complex individual capitals. As a consequence, these capitals have been able to speed-up their turnover, thereby gaining a further competitive edge against small capitals.

automation process in electronics assembly; more specifically, in the phase of circuit-board assembly, which constitutes the core process of product level electronics manufacturing, also accounting for the bulk of its cost of production {Sturgeon, 1998 #75, pp. 12-13}. As Sturgeon shows, this change in the materiality of the assembly process of circuit boards has been achieved through the passage from ‘pin-through-hole’ (PTH) technologies to ‘surface mount technologies’ and driven by the technical need to place increasingly more complex pieces of circuitry in increasingly smaller areas of board space {Sturgeon, 1998 #75, pp. 13-14}. Whilst the dexterity of the human hand sufficed to perform the task of assembling micro-components on circuit boards with the older PTH technology, the precision involved in quickly and accurately doing that operation using SMT exceeds the material powers of manual labour {Sturgeon, 1998 #75, pp. 13-14}. The important point for the purpose of our discussion is that the adoption of SMT assembly involves outlays of capital and productive scales that are beyond the potentialities of small capitals {Sturgeon, 1998 #75, p. 16}. And this confirms two inter-related aspects of the objective limits to the reproduction of small capitals and, more specifically, to more ‘captive’ governance structures of GCCs that had characterised competition on the world market before the 1990s. First, the way in which those limits are asserted through the increase of the productivity of labour of normal capitals and the concomitant reduction of the normal price of production that regulates their valorisation. Secondly, these trends illustrate the incapacity of small capitals to be at the vanguard of the development of the forces production and, therefore, the non-progressive character of their reproduction as the source of the enhanced accumulation of lead firms within commodity chains.

The determinations of the differentiation of the valorisation capacities of individual capitals and their dynamics rooted in the general laws of movement of total social capital can also help explain the other side of this increased vertical integration at the level of suppliers, namely, the specialisation of lead firms at the top end of the chain. The first thing to note in this respect is that this *also* is a clear expression of the general tendency for the concentration and centralisation of capital stemming from the historical development of large-scale industry. The tendency for the concentration of capital refers to the growing magnitudes of social wealth in its value-form needed for individual capitals to function as a normal or average capital with the development of capitalist production {Marx, 1976 #56, pp. 776-777}. This does not necessarily coincide with the material concentration of productive functions under the command

of each of them. Thus, that tendency is not negated by the outsourcing of virtually the entire direct manufacturing phase by ‘lead firms’ in commodity chains, since the outcome of that ‘strategic choice’ is the increased magnitude of social wealth required by *both* innovation and manufacturing, albeit now fragmented into separate branches of the social division of labour.<sup>29</sup> In fact, one of the reasons behind the decision to outsource a wider arrange of productive functions is precisely to devote larger sums of capital to product R&D in the face of shorter product cycles and greater product complexity. The point is that this growing *concentration* of each of the (now two) formally independent individual capitals, is achieved through a *different modality* of cross-branch *centralisation* of the part of the total social capital devoted to the overall production of the final product, that is, through a ‘change in the distribution of already available and already functioning capital’ {Marx, 1976 #56, p. 777}. Whilst in more ‘captive’ production chains that centralisation brings together innovation and final assembly under the command of a single capital but decouples the latter from component production, ‘turnkey’ production chains centralise the total social capital in the latter two branches of the social division of labour but fragments it in the former node.

The second point concerns the reason why, if we provisionally accept for the sake of the argument that these giant global suppliers are indeed normal capitals, they nonetheless remain in a subordinate position *vis-à-vis* brand-name firms. As we mentioned earlier, the latter still have the ability to shape their global suppliers’ turnover circuit in their own benefit through the particulars of turnkey contractual arrangements. But turnkey contractors being normal capitals, those unequal relationships in the sphere of circulation must mediate a different content from the transfer of surplus-value out of small capitals that characterises ‘captive’ governance structures. Although no more than a tentative hypothesis, I would like to suggest that at stake here is the determination of brand-name firms as *innovation-producing capitals* in the sense defined in section 4. The persistently higher valorisation capacity

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<sup>29</sup> The increase in the subdivision of social labour into ever more numerous branches of production is an immanent tendency of large-scale industry {Marx, 1976 #56, p. 572}. This means that large-scale industry has *both* the tendency to multiply the mediation of the social division of labour through the commodity-form (i.e. the repulsion of the many fractions of the total social capital from each other) *and* the (alienated) socialisation of labour through the concentration and centralisation of capital (mutual attraction of individual capitals) {Marx, 1976 #56, p. 777}. However, the progress of capitalist production leads to ever greater requirements of capital to produce relative surplus-value and hence eventually makes the latter tendency prevail over the former.

of these ‘flagship firms’ which underpins their overall command of turnkey commodity chains is thus sustained on their ‘entitlement’ to a regular inflow of a part of the surplus profits over the *average* rate of profit of *normal* capitals that would have otherwise been directly appropriated by global suppliers. The latter have no option but to agree to give up part of their extra surplus-value since this is the material condition for them to drive their individual price of production below the socially determined one, i.e. to produce a surplus profit through innovation {Iñigo Carrera, 2003 #59, p. 132}. In other words, since global contract manufacturers can only implement process and detail product innovations by having access to the general architectural product designs made by brand-name firms, they will be happy to relinquish a part of the potential extra surplus-value if that is the condition to appropriate the rest of it.<sup>30</sup> EMCs will therefore sell their manufacturing services to brand-name firms *below* their socially determined price of production as long as they are still able to produce at an even lower individual price of production.

Finally, this discussion raises the question of the limits to these recent trends towards the de-linking of innovation and manufacturing. GCC researchers have been cautious not to generalise and overstate the effective reality of these developments. On the one hand, they have pointed to sectoral differences in the unfolding of these tendencies, noting the unevenness with which the strategy of nearly total outsourcing of manufacturing has been implemented. For instance, research has shown that, unlike electronics brand-name firms, car makers have tended to retain final assembly and have outsourced only the design and manufacture of components (or modules of them) to the emerging giant global auto-parts suppliers {Sturgeon, 2003 #4; Humphrey, 2003 #77}.<sup>31</sup> On the other hand, scholars have highlighted some reasons why lead firms might want to maintain certain manufacturing functions in-house, among them: fears of loss of innovative capacity, leakage of proprietary information to competitors through shared suppliers, creation of competitors if suppliers choose to

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<sup>30</sup> One of the fundamental concrete forms that mediates the relationship between the innovation-producing capital and the contract manufacturer is the development of ‘open-but-owned’ proprietary systems built to restricted standards. Borrus and Zysman describe the system as follows: ‘In the new systems, key product standards, especially the interface specifications which permit interoperability with the operating system or system hardware, are owned as intellectual property but made available to others who produce complementary or competing components, systems, or software products. Hence the systems are “open-but-owned”. The relevant technical standards are licensed rather than published, with either the universe of licensees, the degree of documentation of the technical specifications, or the permissible uses, ‘restricted’ in some fashion’ {Borrus, 1997 #72, p. 9}.

<sup>31</sup> Thus, the determinations developed above in relation to ECMs apply to first-tier suppliers in the case of the car-making.

move into production of final products, etc. {Sturgeon, 2003 #4, p. 39}. However, no insight has been offered into the *objective* limits to this form of global competition that stem from the general tendencies of accumulation at the level of the total social capital, and which will eventually emerge regardless of the ‘preferences’ and strategies of lead firms. As much as the limits of more captive network-forms, these limits derive from the tendency for the concentration and centralisation of capital through which the production of relative surplus value is realised. In effect, the efficiency gains of outsourcing of manufacturing are conditioned by the extent to which global contract manufacturers achieve economies of scale and speed ‘that surpass those of any single firm because they reside externally and can be effectively shared by the industry as a whole’ {Sturgeon, 2002 #23, p. 471}. This they can do by operating with generic (i.e. non-product specific) process technologies that can be deployed to serve a very wide customer base. However, what scholars have not mentioned is that those economies of scale and speed will tend to decrease as the centralisation of capital in the final products markets leads to the shrinking of the pool of potential customers. Eventually, vertical ‘reintegration’ of innovation and manufacturing will prove more conducive to the increase in the productivity of social labour (hence to the production of relative surplus-value) than their continued de-linked mode of existence.

## **6. Conclusion**

This paper has critically examined the GCC approach and the nature of GCCs. As I hope to have shown, GCC research offers a very useful empirical investigation of contemporary trends in the forms of global capitalist competition. However, it fails to find this novel phenomenon in the general laws of motion of capital as a whole. As a consequence, I have argued that the GCC approach cannot actually provide a firm explanation of the constitution and dynamics of its own object of inquiry. These shortcomings are not to be found in the more recent GCC research only, with its characteristic industrial organisation/management theory turn. It can even be traced back to its origins in the World-Systems school.

Those difficulties can be overcome by re-considering GCCs in the light of the Marxian critique of political economy. The paper has shown that the latter can offer

valuable insights into this social phenomenon by uncovering the way in which this *industry-specific* phenomenon *mediates* the underlying unity of the *system-wide* dynamics of the total social capital. To paraphrase Marx, the critique of political economy can illuminate the way in which this novel particular form taken by the competition among individual capitals across branches of production dispersed across the globe, ‘force the inherent determinants of capital upon one another and upon themselves’ {Marx, 1973 #58, p. 651}. In so doing, it can posit GCCs on more robust foundations, uncovering not only the true underlying content behind their emergence and initial configuration (the differentiation of industrial capital and the release of surplus-value by small capitals in the sphere of circulation), but also the dynamic principle underlying their subsequent transformation and evolution away from more ‘captive governance structures’ with the rise of a global supply-base (the ways in which the tendencies for the concentration and centralisation of capital undermine the basis for the continued reproduction of small capitals and lead to decoupling of innovation and manufacturing).

This critical appraisal of the GCC approach has nonetheless been incomplete. In effect, for reasons of space I have limited the discussion to the ‘network’ aspect of GCCs at the expense of hardly addressing their global character. This latter dimension cannot be ignored when attempting to provide a comprehensive assessment of this form of capitalist competition on a world scale. In turn, this global dimension bears on the question of the contemporary forms of the international division of labour. Needless to say, we cannot deal with this issue at great length in these concluding remarks. However, a few words on this can indicate in broad outline the inner connection between GCCs and the so-called ‘New International Division of Labour (hereafter, NIDL)’ {Fröbel, 1980 #78}.

As an expression of the recent transformations in the capitalist labour process associated with the computerisation and robotisation of large-scale industry and the revolution in the means of communication and transport, capital has been increasingly able spatially to disperse the different parts of the labour process across the globe whilst maintaining their organic material unity. This social process historically started with the relocation of simple manual labour processes while concentrating its increasingly more complex parts in advanced capitalist countries. This is the particular manifestation of the NIDL that Fröbel and his colleagues rightly captured in

the late 1970s without being able to uncover its general content. The subsequent upgrading of the industrial base of some countries have revealed that those simple original forms of the NIDL have evolved into a more complex constellation, whereby capital searches worldwide for the most profitable combinations of relative cost and qualities/disciplines resulting from the variegated conditions of reproduction of the different national fragments of the global proletariat. The general content of the NIDL can now be grasped as the global fragmentation of the different partial organs of the collective worker of large-scale industry. Each country therefore tends to concentrate a certain type of labour-power of distinctive 'material and moral' productive attributes (hence of determinate complexity and conditions of reproduction).<sup>32</sup>

The significance of these transformations of the international division of labour for the comprehension of the inner determinations of GCCs should be obvious. For it is clear that the formation of GCC does not only express the formal differentiation of industrial capital into individual capitals of stratified valorisation capacities. In addition, they mediate the functional fragmentation of the exploitation of the global collective labourer along the lines of the relative complexity/cheapness of the productive subjectivity of its different partial organs. This can take an explicitly global dimension (off-shore production) or, through the international migration of the working class, it can be reproduced within the national territory by formally mediating class exploitation through ethnic, racial or gender divisions {see Lüthje, 2002 #74; Lüthje, 2003 #80, for a detailed description of the way in which the stratified relations among capitals within the electronics industry GCCs mediate the differentiation of the conditions of reproduction and exploitation of workers}. Furthermore, each determination can reinforce the other: the formal division between normal and small capitals can be spatially mediated, thereby acting as a mediator of the international fragmentation of the extraction of surplus-value on the basis of the complexity of the labour-power exploited.

All this is of directly practical interest inasmuch as it delineates the contemporary terrain of the class struggle. Through the interplay of geographical dispersion, formal differentiation of individual capitals and increased functional differentiation of workers on the basis of the quality of their productive subjectivity,

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<sup>32</sup> However, the emergence of the NIDL has not led to the disappearance of the 'classic' international division of labour {Grinberg, 2007 #79}. Both coexist in the contemporary configuration of the world market, which leads to a more complex form through which the material unity of the global accumulation of process is achieved.

GCCs exacerbate the competition among workers, thereby making it more difficult to establish links of class solidarity. In particular, the internationally dispersed nature of GCCs puts a specific limit to the transformative powers of national social struggles. The discovery of effective forms of internationalist collective action becomes an urgent unavoidable task.