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Global value chains as entrepreneurial capture: insights from management theory

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ABSTRACT

Management theory offers a unique perspective on the political nature of production epitomized in global value chains (GVCs). Through our reading of management, we challenge several assumptions underpinning much GVC thinking to provide a counter-narrative to the idea that GVCs equate to development. We focus on three ideas within management theory – the entrepreneurial function, the management of knowledge, and standardization. Together, these show the political nature of ‘management’ as class struggle. We unpick the underlying Schumpeterian assumption within mainstream GVC analysis that economic development, and value creation, lie with entrepreneurial functions. In contrast, we present entrepreneurship as value capture. We emphasize its inherent link to knowledge to argue that supposedly developmental entrepreneurial attributes (lead firms in GVC analysis) rest on the concentration and control of knowledge, rather than its dispersal and relinquishing. This concentration is twofold: in negotiations between knowledge sharing and nonsharing inherent to outsourcing and GVCs, and knowledge concentration between low and high ‘value adding’ activities in the international division of labor. We suggest this division of labor relies on standardization – a process that unveils management’s class basis. We conclude to suggest GVCs, like management generally, are not technical divisions of labor, but extended *political* organizations capturing value.

KEYWORDS

Global value chains; entrepreneurship; economic development; division of labor; class struggle; management; standardization; knowledge concentration; value capture; Schumpeter

1. Introduction

As highlighted in Eagleton-Price and Knafo’s introduction to this special issue, one of the defining ways in which global governance has shifted in the past three decades has been through the expansion of management practices. They further suggest that IPE literatures often see management in a technical light – as a somewhat uncomplicated set of efficiency tools which render it peripheral to the analysis of global governance. In replying to the call, we aim to complicate management by demonstrating

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that far from being merely ‘technical’, management is highly political and studying it ‘reveals a range of complex histories, agents, and implications that are not self-evident and carry direct relevance for how we understand the world economy’ (Eagleton-Price and Knafo, Introduction; 3). We explicate management as a process of social struggle waged from above. Furthermore, again in conversation with the special issue, we utilize politically and socially informed historical and empirical analysis of management thought and practice in order to develop a political economy of the management of the contemporary global value chain (GVC). We do not conflate management with neoliberalism. Neoliberalism is a governance structure aimed at reforming states, markets, and organizations. In our analysis we are examining management as a process of direct and/or indirect control within the organization or the GVC. As such, management is a tool for *delivering* aspects of neoliberalism, e.g. competition amongst labor groups, but it is not to be conflated with neoliberalism as such. We examine management as a set of tools that enable particular groups to enforce competition on others and to render the knowledge and ways of living of those groups as somehow lacking and hence in need of change. In particular, we see managerialism as creating competition and enforcing it on others through standardization, but importantly, not on everyone, nor everywhere through standardization. Thus, we see management as built on the foundation of the late-nineteenth and early-twenty century standardization of the division of labor, rather than new forms of post-war ‘science’ such as systems analysis or the dispersal of strategy throughout organizations (Dutta, Knafo, Lane, & Wyn-Jones, 2018; Knafo, Dutta, Lane, & Wyn-Jones, 2019). In so doing, our analysis of management – and specifically its relationship to standardization and the division of labor – will help us better understand contemporary international political economy.

This analysis combines the works of Marx and Veblen (Sweezy, 1958). Veblen is a radical thinker linked to institutionalism and his understanding of changing institutional regimes and of ownership and control at the turn of the twentieth century enables us to innovatively examine the GVC. Combined with a Marxist analysis of the division of labor, we use Veblen’s work on standardization and the ‘machine process’ to argue that GVCs are a further development of some of the management processes of the early twentieth century. These practices, as we aim to show, were never merely technical, they were located in a political struggle waged from above to redistribute value away from labor. Our analysis suggests the contemporary GVC is a continuation of this political process. But let’s start with the GVC.

Global chain value analysis has gone from a tool of critical industrial sociology for understanding the uneven distributions of wealth in increasingly fragmented networks of global production, distribution and consumption, to a policy framework pitched as a tool for improving (‘upgrading’) the position of firms and countries in these networks. Despite its importance, few accounts explore and assess critically the *theoretical* assumptions underpinning GVC analysis (for exceptions, see Bair, 2005; Selwyn, 2012; Starosta 2010a). This – partly – stems from the various ways in which GVC analysis is deployed, including in parallel frameworks such as global production network (GPN) analysis and supply chain management (SCM), with the result that there is ‘no common purpose’ cutting across or even *within* these approaches beyond a shared concern with studying the ‘chains’, ‘networks’ or ‘systems’ that connect production and consumption in contemporary capitalism (Bernstein & Campling, 2006, p. 240). Indeed, Gibbon, Bair, and Ponte

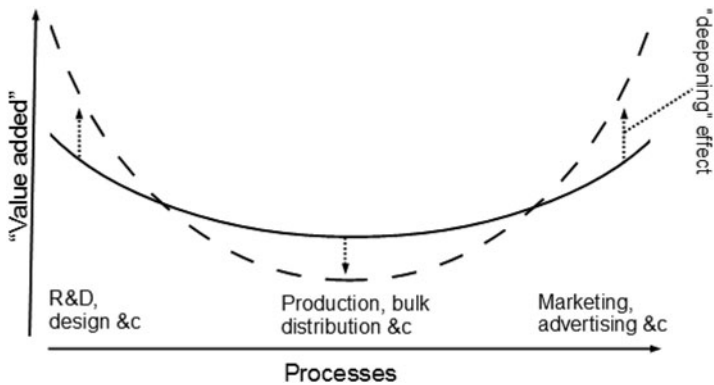


Figure 1. The smile curve. Source: Quentin and Campling (2018).

(2008) argue GVC analysis is a methodological not a theoretical framework. This partially explains why ‘chain’ frameworks are deployed in such diverse fields (and intellectual traditions within them), as development studies, economic geography, international business, international economics and international political economy. Nonetheless, in the adoption and adaption of GVC analysis by International Financial Institutions and Regional Development Banks (hereon IFIs), a number of underlying economic development assumptions *are* apparent, many of which stem from a Schumpeterian reading of capitalism that underpins earlier work by leading GVC analysts such as Gereffi, Kaplinsky and Sturgeon.

We interrogate these issues through a critical reading of management theory. Rather than a technical instrument naturally developing from the need to run organizations, we argue management theory and practice are political. Historically, management positioned itself as a neutral efficiency tool acting in the interests of all (even if some would or could not know their own interests – a key feature of managerialism). To reject this proposition our argument focuses on three, connected, managerial elements: the entrepreneurial function, the management of knowledge, and standardization. We argue that taken together, these elements cast light on management as a class project and IFI’s promotion of articulation with lead-firms’ GVCs as a class-based development management strategy. Here, standardization enables managers to strategize how best to exploit opportunities of knowledge concentration and entrepreneurial capture. As such, scientific management like standardization, not post-war knowledge forms (Dutta et al., 2018; Knafo et al., 2019), is the bedrock of managerialism. Through this lens, GVCs cease to appear as a *technical*, global division of labor where developing countries ‘learn to make things’ and instead emerge as processes of value capture, from labor to capital, via increasing standardization. We use this insight to invert the ‘smile curve’ – a commonly deployed managerial schematic of the global division of labor characterizing low ‘value added’ in raw material production and manufacturing at the broad base of the smile and high value added in R&D and branding at its two arcs (Figure 1) – to argue that highly concentrated firms controlling entrepreneurial functions, knowledge, and standardization are involved predominantly in capturing rather than creating value.

Drawing from Marxist analyses of the division of labor and Veblen’s work on corporations, we suggest that the contemporary smile curve relies on management’s

standardization tendencies. Standardization underpins functional distinctions between the mere process of production and the contemporary plethora of ‘value adding’ management activities which include and culminate in supply chain management – itself a sub-discipline in today’s Business Schools. We show how standardization unveils management’s class basis and this allows us to argue that GVCs are not technical divisions of labor, but extended, *political* organizations founded on the continuous expansion and capture of value. This situates systematic value accumulation away from labor as a structural rather than a residual element of GVC development (on some of its worst manifestations, see Crane, Le Baron, Allain, & Behbahani, 2017; Stringer & Michailova, 2018), and considers supply chain management and standardization among the root causes of this movement of value away from labor rather than a remedy for such movement (Gold, Trautrim, & Trodd, 2015; Soundararajan, Khan, & Tarba, 2018).

Following this introduction, we proceed in five sections. Section 2 outlines the underlying assumptions of IFIs promotion of GVCs as a developmental ‘win-win’ and the associated mapping of GVCs as divisions of labor where more or less value is ‘added’ in the ‘smile curve’. In Section 3 we offer a critical reading of Schumpeter to highlight widespread, but often hidden, underlying assumptions that economic development, and indeed the creation of value, lie with the entrepreneurial function. We argue the Schumpeterian view is in line with mainstream GVC thinking and its notion of upgrading. Through Kirzner and Hayek in Section 4, we consider alternative understandings of the entrepreneurial function as essentially value capture and trace this thinking through the critical reading of GVCs advanced by UNCTAD. The analysis of entrepreneurship as value capture is developed further by emphasizing entrepreneurs inherent link to knowledge. Here we argue entrepreneurship’s supposedly developmental attributes rest on efforts to concentrate knowledge. Section 5 argues knowledge concentration is twofold: whilst the most manifest aspect appears in constant negotiations between knowledge sharing and non-sharing inherent to outsourcing and the proliferation of global supply chains, a less manifest but more powerful element of knowledge concentration rests within the division of labor between low and high value adding activities epitomized in the division of labor in the smile curve.

2. Making ‘global value chains work for development’?

A standard management trope is there is ‘one best way’ to grow production, profit, organizations, and economic development. Scientific management is perhaps the apotheosis of this. Good management provides efficiency for all, whilst alternatives are inefficient and/or driven by sectional interests and, as such, hold back capitalist development (Taylor, 1919). Interestingly, much GVC research is also driven by the belief countries best develop through embracing the management efficiencies GVCs offer them because ‘it is less a matter of globalization being intrinsically good or bad, than how producers and countries insert themselves in the global economy’ (Kaplinsky & Morris, 2001, p. 15); or as Baldwin (2016, p. 243) puts it, how to make ‘global value chains work for development’. Amongst global bodies, and many states, this view is key to ‘rethinking development policy’ (Baldwin, 2016). In development policy terms, the 2010s look like the decade of GVCs. While some IFI researchers are analytically sophisticated and critical of power

dynamics underpinning GVCs, the unproblematized notion of ‘upgrading’ in GVCs is perpetuated politically by donor policy *practices* (Humphrey & Alemán, 2010; Neilson, 2014) and in public statements by IFI representatives. For example, in 2013, the OECD Secretary-General Angel Gurría commented: ‘Everyone can benefit from global value chains. ... Encouraging the development and participation in GVCs is the road to more jobs and sustainable growth for our economies’ (OECD, 2013a) and at the launch of the flagship *African Economic Outlook* report on *Global Value Chains and Africa’s Industrialisation* (AfDB, 2014a), Mthuli Ncube, Chief Economist and Vice-President of the African Development Bank, stated: ‘In the medium- to long-term, the opportunity for participating in GVCs, should be viewed as part of the strategy for achieving strong, sustained and inclusive growth [in Africa]’ (AfDB, 2014b).

This departs from the GVC framework’s radical antecedents in commodity chain (Hopkins & Wallerstein, 1986) and global commodity chain (GCC) analysis (Gereffi, 1994), both of which stressed uneven development in international divisions of labor. While GCC research could be of *implicit* policy relevance (i.e. firms, governments or activists could, and the latter certainly did, make use of GCC research, e.g. Hale, 2005), much GVC literature is *explicitly* policy and development management oriented, particularly regarding variables affecting the upgrading potential of developing country firms and the implementation of government policies to encourage upgrading (Gereffi, 1999; Kaplinsky & Morris, 2001). To work, GVC projects must believe economic development and corporate management of GVCs are, or can be, aligned. As such, ‘better’ management will ‘develop’ economies. In so arguing, mainstream GVC approaches connect with management theorists like Michael Porter (1985, 1990) who stresses synergies and reconfiguring value chains *within* firms to enhance competitive advantage in the ‘value system’ of inter-firm linkages.

Importantly, Schumpeter’s (2008) entrepreneurship theory influences the assumptions made in GVC analysis about economic development, to which we turn in detail below (Selwyn, 2015; Starosta 2010a; Sturgeon, 2002). Schumpeter highlighted organizational innovation as central to developing economies. He stressed the importance of industry organizational innovation *in its own right* as a vital strategy for corporate and economic development. GVCs are one such organizational innovation and hence are linked to economic development. For example, Sturgeon (2002, p. 468), a leading GVC theorist, suggests ‘industry organization, the social division of labor, if you will, has been and is now a central force in capitalist development’. Schumpeterian innovations are explicitly operationalized in GVC literatures through upgrading. Take, for example, Kaplinsky and Morris’ (2001) influential ‘Handbook’ on GVC research, which focuses on income distribution along and across chains, and identifies ‘effective policy levers’ for developing country governments to ‘upgrade’ interactions with value chains in the context of global trends of ‘unequalization’ (see also Kaplinsky, 2000a, 2000b; Wood, 2001; and for an application, Kaplinsky & Morris, 2008). Echoing Schumpeter (2008), Kaplinsky and Morris (2001) identified four types of upgrading: (1) improving production processes within or between firms; (2) improving products within or between firms by product quality, design, or marketing; (3) ‘changing functional positions’ through the adjustment ‘of activities undertaken within a particular link, or moving to activities taking place in other links’; and, (4) shifting from one chain

to another (Kaplinsky & Morris, 2001, p. 76; a typology mirrored in Gereffi, 2001, p. 5, and the cornerstone of all GVC work on upgrading since, see Campling & Selwyn, 2018). Hence, again, ‘better’ management creates ‘better’ development. Kaplinsky and Morris detail functional tools for upgrading (e.g. how to decide whether or not a link has upgraded) and an implicitly strategic perspective (e.g. how policy mechanisms can be employed in a developing country/firm ‘link’ to facilitate upgrading). This research assumes development ‘requires linking up with the most significant lead firms in the industry’ (Gereffi, 2001, p. 1622; see also Baldwin, 2016, p. 217; Kaplinsky & Morris, 2001, p. 15); an assumption also central to the GPN 2.0 project’s notion of ‘strategic coupling’ (Coe & Yeung, 2015; Yeung, 2015).

This relationship between GVC upgrading and economic development is challenged from a range of perspectives rooted in classical political economy. For example, from a world-systems theory frame, Brewer (2011) identifies an ‘upgrading paradox’. Though countries are encouraged to follow upgrading trajectories to development, generalizable development for all is an illusion under global capitalism because the system ‘is based on relational processes of exploitation and relational processes of exclusion that presuppose the continually reproduced poverty of the majority of the world population’ (Arrighi, 1990, p. 16). In institutional economics, Milberg (2008) analyses the distribution of gains in inter-firm power relations to demonstrate how increasingly financialized configurations of GVCs are organized by US MNCs to squeeze rents from suppliers. Havice and Campling (2013) show how ‘upgrading’ for some firms and workers generally produces ‘downgrading’ for others. Further, Bair and Werner’s dis/articulations approach criticizes the ‘inclusionary bias’ of GVC upgrading and its associated idealized, linear processes of development; instead arguing that GVCs are part of ‘the reproduction of uneven geographies of capitalism as they relate to processes of incorporation and exclusion’ (Bair & Werner, 2011, p. 1000). And despite his comparative optimism, Gereffi recognizes inter-firm power dynamics in GVCs; where a lead firm’s enhanced profitability is achieved by maintaining a position of oligopoly or oligopsony in strategic nodes of chains characterized by high barriers to entry for other firms (Gereffi, 1999, pp. 43–44, 2001, pp. 1620–21). This angle is further developed in an analysis by Durand and Milberg (2018) of intangible-intensive and non-intangible intensive firms across the world, which largely mirrors the distinction between advanced economies and the rest of the world. Their research demonstrates empirically that industries outside of the advanced economies ‘are almost completely deprived from control over intangible assets’ which ‘limits value capture opportunities by tangible-intensive producers’ thereby limiting ‘room for social upgrading’ (pp. 32–33).

In adopting and adapting notions of upgrading from the GVC framework, IFIs jettisoned dependency theory or the dynamics of ‘unequalisation’ which inform critical analysis of GVCs (Werner et al. 2014). Indeed, GVC upgrading, as promoted by IFIs and in the supply chain management literature, assumes more value is ‘added’ in intangible activities. As such, it takes at face value capitalist methods of accounting, i.e. those activities in production networks that *record* higher profit rates are believed to have created or ‘added’ this value (Haslam, 2013). This is apparent from reliance on the smile curve in mapping economic development – first articulated by the founder of Acer, Stan Shih – and lying at the heart of

mainstream GVC thinking (Baldwin, 2016; Low, 2013). The smile curve's 'value added' is higher either upstream (e.g. R&D, design) or downstream (e.g. branding, marketing) while production and distribution processes seemingly create lower value.¹ Indeed, IFI discourse on smile curves argues these processes are *deepening*; meaning that 'value added' at the arcs of the smile is increasing as a proportion of total value added (OECD, 2013b). Recent research on 'value added' using a database of about 2.3 million firms based in the EU has confirmed this trend at the micro-economic scale. It concludes that the 'asymmetric generation of value at the firm-level' has implications for welfare as 'specialization by a country on a segment of the supply chain where value is higher or lower may matter for its growth potential' (Rungi & Del Prete, 2018, p. 41). If upgrading and the relations between tangible and intangible GVC assets are increasingly central to economic development, we need to understand how policy makers and others understand development. Central to this understanding is Schumpeter, to whom we now turn.

3. Schumpeter on entrepreneurship as economic development and value creation

Schumpeter's influence on the political economy of management is significant. Drucker (2007) cites his call for an 'entrepreneurial society'. Drucker's theory is perhaps the dominant management discourse as globally organizations embed entrepreneurial management practices. Schumpeter (2008, pp. 62–63) is influential because he explicitly acknowledges the entrepreneurial function as *the* function to enable development – it is through entrepreneurial activity that economies develop on their 'own initiative from within'. This is because development is 'spontaneous and discontinuous change in the channels of the flow, disturbance of equilibrium, which forever alters and displaces the equilibrium state previously existing' (2008, p. 64). Development comes from discontinuity rooted in entrepreneurial activity, *not* consumers, markets, or states. For example, government spending might increase demand, but it will not develop economies to new, more sophisticated levels. Development is achieved through forms of 'disruptive combination' around five components: (1) new goods; (2) new methods of production; (3) new markets; (4) 'Conquest of new source of supply of raw material or half-manufactured goods, again irrespective of whether this source already exists or whether it has to be created'; and (5) new organizational forms – 'like the creation of a monopoly position (e.g. through trustification) or the breaking up of a monopoly position' (Schumpeter, 2008, p. 66).

Because these (re)combinations directly or indirectly involve industrial organization, entrepreneurs *lead* economic development. Indeed, the entrepreneurial activities of 'the leader, which is a necessary condition to the realization of the combination, may be conceived as a means of production' (2008, p. 143) so that the 'leader and the means of production are equally necessary, and the whole of the surplus value of the products depends upon the cooperation of both' (2008, p. 143). Whilst discussions of entrepreneurship often focus on individual entrepreneurs rather than firms, and individuals were certainly central to Schumpeter's analysis, importantly, he accepted that *the leaders of corporations could and did act entrepreneurially*. In relocating companies or firms, 'leading men often continually embark upon new enterprises, whereby they then continue the role of the original

promoter and are entrepreneurs, whatever their official position in the company may be' (2008, p. 138). In ways redolent of the smile curve, he argued that as oligopolistic capitalism took hold, industrial research, design, innovation, marketing, would grow in importance and act as barriers to entry because they would codify and concentrate knowledge (Schumpeter, 1947; see also, Sturgeon, 2002, pp. 464–8). In arguing this, he explicitly recognized corporate entrepreneurial activity (like all entrepreneurial activity) is linked to attempts (never complete) to escape competition and establish monopoly (see point five above; also Christophers, 2016).

However, problematically, entrepreneurship's central role in economic development, is granted *all* profit:

and then there is the general truth: profit as a special and independent value phenomenon is fundamentally connected to the role of leadership in the economic system. If development required no direction and no force then profit would indeed exist, it would be part of wages and rents, but it would not be a phenomenon *sui generis* (2008, p. 147).

Here, since wages, rents, taxes, interest, etc. derive from entrepreneurial profit, to develop economies entrepreneurial functions *must* be freed up and fostered, e.g. corporate entrepreneurship, such as Taylor's new methods of production, must be facilitated. Doing so enables entrepreneurial profit to first grow and then decline as its knowledge breakthrough disperses to society until economies stagnate in anticipation of the next burst of recombining knowledge and activity.

When debating whether or not these super profits should be dispersed to others, Schumpeter wrote 'I answer no; and assert that even here the services of labour and land be estimated at their old values' (2008, p. 142). Why? Because these wages/costs are built on customary experience whereas the 'new' economy is new and *outside* existing value systems – labor, despite being in the new combination, is 'homogenous' with the (passive) existing labor of the old society and hence should get the same market-based wages. Thus, a consequence of entrepreneurial profit is to slow the trickle down of development until labor has adapted to the new economy's value system. Given this, in a new economy entrepreneurial profits are (temporarily) monopolistic. Furthermore, because they are super profits they can reinforce firm advantage and create a monopoly based in rent (2008, p. 152) – or presumably be moved elsewhere. Thus, although any burst of super profit is located in organizational entrepreneurship, Schumpeter acknowledges it can create monopolies, which he distinguishes from entrepreneurial monopolies by suggesting such monopolies collect revenues generated from earlier entrepreneurial profits – a form of rent (see also Schumpeter, 1947). Importantly, anti-monopoly practices of competition push economies toward equilibrium so that for him the beginning of the end of entrepreneurial profit means *competition does not create development* (this is not to say competition is unimportant – see later). Instead, competition is systematically avoided in an entrepreneurial world (2008) – entrepreneurial development (and corporate management, hence its desire to foist competition on some but not all) tends towards monopoly unless powerful (competitive) forces oppose it and move economies towards stagnation/equilibrium. In such a developmental world, power relations are vital.

In this rendition, entrepreneurial development centralizes control in five ways: (i) ownership of value belongs to entrepreneurial creators; (ii) housing entrepreneurship within large firms is possible (Schumpeter, 2008); (iii) entrepreneurship

seeks monopoly, first as profit and then as rent; (iv) the (partial) avoidance of competition; and (v) structured power relations supporting this overall process of 'trickle up'. Schumpeter (1947) believes entrepreneurs are the harbingers of 'creative destruction'. He further argues once a society is opened up to entrepreneurship it will, with the right institutional conditions, grow as new entrepreneurial values are created within populations (2008). Again, a fundamental policy assumption of the IFIs.

Schumpeter's ideas resonate with discourses emphasizing the entrepreneurial role of lead firms within supply chains. In much supply chain management literature, the *management* of the supply chain is trumpeted as the 'rising tide that lifts all boats' (Crook & Combs, 2007). While recognizing that 'the ability of smaller firms to capture value depends to a significant extent on power relationships in the chain', the OECD and World Bank then argue 'lead firms' are key to economic development: 'Still, the MNEs, with their scale and access to markets and technology, may be the main channel for SMEs to participate in GVCs either directly or indirectly' (OECD-WTO-WBG, 2014, p. 22, emphasis added). This view is echoed in the Asian Development Bank (ADB) (2015) report *Integrating SMEs into Global Value Chains*, which calls for 'encouraging the further penetration of Asian SMEs into global value chains' (Akamatsu and Yoshino, 2015: 'Foreword'). It suggests: 'GVCs enable SMEs, which typically face a number of constraints, to act as suppliers or service providers to lead firms, typically large firms or multinationals' (Abe, 2015, p. 59) so that through GVCs SMEs *will learn to be entrepreneurial and to upgrade* and in turn develop home economies. This interest in SMEs is echoed in a prominent report on GVCs co-published by the WTO (Elms & Low 2013), where SMEs 'are seen as the backbone of employment and poverty reduction in ASEAN economies', whose very existence depends upon MNCs which 'drive the process of production *fragmentation*' (Wignaraja, 2013, pp. 279–280, emphasis added). Schumpeter argues by creating entrepreneurial profits that need to be invested elsewhere, economies further develop and so the idea of SMEs learning by piggy-backing on MNCs emerges because lead firm entrepreneurial profits are developing economies as they search for entrepreneurial opportunities facilitated by receptive states (Baldwin, 2016).

To take things further, in Schumpeterian business cycles new entrepreneurial values enable activities necessary to develop economies at an even higher level. Business cycles themselves emerge because entrepreneurs come in swarms and generate new forms of knowledge and, as such, if elite entrepreneurs create the right conditions they generate entrepreneurial societies with economic development at their heart (Drucker, 2007; Schumpeter, 2008). Thus, if national governments and international regulators create the 'right' institutional environment to embed corporations with entrepreneurial knowledge, entrepreneurship will penetrate less developed regions and immanently develop economies. Here, the unleashing of competition becomes important because by forcing the entrepreneurial spirit on labor, the limitations of the existing majority collective will be overcome thereby enabling economic development (Hayek, 2002, p. 19).² In this dynamic reading, GVCs make developmental sense because lead firms disperse knowledge to value chains and enable some firms, e.g. major first-tier suppliers such as Taiwan's Foxconn, to emerge as powerful entities in their own right (Appelbaum, 2008; Kumar, 2018).³ Once Schumpeter's premises are accepted, managing in the interests of all requires a deregulated state, large entrepreneurially managed

corporations (shaking up – or *fragmenting* domestic industries), skewing profit to entrepreneurial firms, creating elite entrepreneurial leadership (initially from outside but then hot-housed at home), and the creation of new institutions and values, become common-sense. However, we identify two problems arising from these assumptions. First, is it the case that entrepreneurship, whilst ‘destructive’, actually ‘creates’? Second, is entrepreneurial knowledge, so vital to economic development, *dispersed* so SMEs learn to develop home economies?

4. Kirzner and Hayek on entrepreneurship as value capture

What happens to GVCs as engines of development if we look at the entrepreneurial function differently, as one of capturing rather than creating value? Even within entrepreneurship literatures, which are sympathetic to the heroic developmental role of this function, the view of entrepreneurship as *creative* destruction is contested. For some, even those who are favorable to it and view it as a building block of development, entrepreneurship is also about *capturing* value (Alvarez & Barney, 2006; Metcalfe, 2006). Such an argument is perhaps most explicitly endorsed by the neo-liberal theorist Kirzner, who states

I view the entrepreneur not as a source of innovative ideas ex nihilo but as being *alert* to the opportunities that exist *already* and are waiting to be noticed. In economic development, too, the entrepreneur is to be seen as responding to opportunities rather than creating them; as *capturing* profit opportunities rather than generating them. (1973, p. 74, emphasis added)

Here, value is not created by entrepreneurs, rather it already exists. Schumpeter (2008) viewed this capture (to use a term he would dispute) as fundamental to the cleavage between innovator-entrepreneurs and inventors, to argue inventors do not create value through invention – rather value is created by selling products.

Crucially, Hayek emphasizes a competitive advantage in un-captured value within less developed regions: ‘entrepreneurs constantly search for unexploited opportunities that can also be taken advantage of by others, then this is true of course *to an even greater extent as far as undeveloped societies are concerned*’ (2002, pp. 18–20, emphasis added). Here, the (incoming) entrepreneurial few break the existing customs and habits of less developed regions by exploiting entrepreneurial opportunities and using competition as ‘impersonal coercion’ (2002, p. 19) to alter behavior. In short, contemporary corporations could use Kirzner’s entrepreneurial *alertness* to reap profits from inventions, supplies, cheap labor, knowledge, etc. developed elsewhere. One sees this in the changing nature of GVCs themselves. The GVC has shifted since its introduction in the 1950s by Japanese corporations’ deployment of just-in-time supply chain capitalism (Tsing, 2016). Since then Western MNCs used and morphed it into the new international division of labor (Fröbel, Heinrichs, & Kreye, 1978), and subsequently some GVCs have shifted from a focus on China to Vietnam, Bangladesh (Phillips, 2011) and Cambodia (Chang, 2015). One question concerning GVCs then is what is the innovation – the moment of entrepreneurial profit? Following Schumpeter (2008) one would argue corporate spatial movement is entrepreneurial because it is the ‘conquest of a new supply of raw material or half manufactured goods’ and is an innovation because labor, as a passive homogenous raw material, is cheaper in new locations.⁴ Thus, as business

Table 1. Top 2000 TNCs annual average revenues and profits, 1996–2015 (in trillions of US dollars).

	1996–2000	2001–05	2006–10	2011–15
Net sales/revenues	12.8	18.7	29.7	36.8
Net income or profits	0.7	1.0	2.0	2.6
Rate of profit to revenue	5.7%	5.4%	6.8%	7.0%

Note: all data are based on annual averages for the period specified (UNCTAD, 2018).

cycles progress and levels of high monopoly entrepreneurial profits are challenged within cycles, by both other capitals and labor's demands (Silver, 2003), lead firms seek a spatial fix to maintain entrepreneurial profits. However, and central to the argument presented in the next section, this shift is only possible if standardized labor processes enable different labor groups to be seen as 'homogenous'. Or following Kirzner, is it the case that corporations are merely capturing value already there, i.e. cheaper labour sources? Below we argue that underpinning both theorizations are power relations which enable lead firms to create entry barriers and monopolize value via standardization, standards, supply chain management, branding and marketing, and intellectual property as they avoid competition or the 'conditions of the perennial gale' (Schumpeter, 1943, p. 88, and pp. 81–107).

Here it is worth noting that some international agencies counter dominant Schumpeterian narratives of GVCs for development and explicitly focus on the idea of capture. For example, the UN Industrial Development Organization centers linkages within GVCs in a broader understanding of capitalist development, urging governments to 'look beyond GVC participation and its immediate returns [as an end in itself] and ... [to] factor in broader public policy objectives, such as the number and quality of jobs created, spill-over effects into other sectors, the non-economic and environmental impact of industrial activities, and more generally, contributions to economic diversification and resilience.' (UNIDO, 2015, p. 13). But the sharpest critical lens comes from UNCTAD's Division on Globalization and Development Strategies. Its 2017 *Trade and Development Report* highlights how increasingly concentrated lead firms use GVCs and their lobby power to capture value, a process wherein 'The winner takes most' and 'creating a new form of global rentier capitalism to the detriment of balanced and inclusive growth for the many' (UNCTAD, 2017, p. 125 and 119). In its 2018 *Trade and Development Report*, UNCTAD (2018) details how the world's top 2000 firms are not only controlling a greater proportion of the global economy (e.g. assets), but are increasing their proportion of total sales/revenue and capturing an even higher rate of profit in the process (Table 1). These firms 'lead' because they are the (temporary) winners of capitalist competition in one or more nodes of a GVC, even during the global financial crisis where these firms' average rate of profit grew compared to the prior 5-year period. 'Cascade effects' (Nolan, 2012) are generated where the tendency to concentration and centralization is mimicked by suppliers as lead firms seek to directly articulate with a smaller number of suppliers to more effectively 'appropriate value [and] pass on risk and costs' (Havice & Campling, 2017, p. 294). In this rendition, corporations behave more like the late Schumpeter's (1943) dystopian giant enterprise to extract monopoly rents.

Entrepreneurs seek to limit knowledge dispersal because it is key to their superprofits. But combine this with the probability/possibility of entrepreneurship as value capture, then limiting knowledge dispersal and maintaining super profits may

actually hinder the development of further knowledge. For example, the innocuous sounding practice of ‘open innovation’ builds upon proprietorial assumptions that once you submit your idea it becomes closed and belongs to corporations and is not deployed unless the proprietor corporation decides to. This limits the invention’s developmental potential. Theoretically (and empirically), this suggests concentrating knowledge through property rights (Baumol, 1990), technical systems (Braverman, 1974), sabotaging innovation (Metcalf, 2006; Hayek, 1948), and/or creating monopolies (Kirzner, 1973) is both profitable and real. These practices counter a key tenet of the entrepreneurial role, namely that it *disperses* knowledge (Hayek, 1948, 2002). Through this lens, the optimistic developmental assumptions around GVC participation as learning and knowledge dissemination, i.e. upgrading, start to fray around the edges. This becomes clearer in an examination of the role of lead firms’ concentration of knowledge in intangible assets such as standards, brands, IP, marketing etc. (Baldwin, 2016). For example, having created a value chain based on tightly controlled specifications and standards in Malaysia, Japanese companies used these specifications to extend these value chains to deforest Indonesia (Tsing, 2016, p. 333). More generally, knowledge concentrated in standards forms a key weapon in the armory of lead firms to increase their control of sub-contractors and their ability to surreptitiously reach into informal labor markets to exploit vulnerable labor groups (migrants, women, minority ethnic groups etc.) via ‘adverse incorporation’ into the chain (Mezzadri 2016; Mezzadri & Lulu, 2018; Pattenden 2016; Phillips, 2011). Here controlling and concentrating knowledge through standards does two things. Firstly, it increases the power of GVC lead firms and enables them to capture more value from other capitals and labor. The latter two ultimately bear the costs of standardization. Participation at the bottom of supply chains works through schizophrenic pressures: increased costs of production but lower prices, both imposed by lead firms. Even including active state development efforts, possibilities for increased value capture remain marginal (Gereffi, 2014). Secondly, and more insidious perhaps, the innovative potential of regions at the bottom of the GVC is stifled because what they learn is proscribed by the value chain itself – that is, they are limited to whatever ‘upgrading’ they are permitted. Importantly, as with open innovation, in this analysis, the GVC hinders human potential and echoes Veblen’s analysis of the relationship between the machine process and the business enterprise. In his early-twentieth century analysis, Veblen argued human capacities are under-utilized by being in a machine process subjected to the profit motive of the business enterprise which controlled firms and labor markets outside its direct ownership through standardization, brands, etc. (Sweezy, 1958). In this reading, the concentration of knowledge and power in GVCs conspire to stunt the development of significant segments of the global economy because the limitless potential of those segments are channeled into performing standardized tasks under the direction of others.⁵ Theoretically then, there is no reason lead firms should disperse knowledge and develop economies. Thus *entrepreneurs potentially can use GVCs to both capture value and restrict economic development in order to expand and extend entrepreneurial profit* (on this see Veblen, 1908b).

Given the possibility, or perhaps probability, that corporations engage in value capture, a more dystopian Kirzner-like view of GVCs emerges. Namely, entrepreneurially managed corporations legitimately capture and concentrate value,

especially through the control of intangible assets (Durand & Milberg, 2018). Here, entrepreneurial knowledge legitimizes ‘a finders-keepers’ (Burczak, 2002) or a ‘winner takes most’ society (UNCTAD, 2017, p. 125 and 119) which justifies economic development as enabling the asset rich to claim rights to value produced elsewhere and thereby further polarize wealth whilst allowing some limited trickle-down effect (Burczak, 2002; UNCTAD, 2017). Here, corporate managed entrepreneurial activity, rooted in recombining the division of labor, is as much about the power to capture value and exploit monopoly/oligopoly as it is about value creation or knowledge dispersal. If this is a possibility, GVCs take on a different hue in relation to the organization of divisions of labor. Reading the GVC as a pure technical function is, in the words of Althusser, a ‘blindingly self-evident truth’ (2016, p. 35) masking the capitalist management of the division of labor. Thus, in any examination of ‘better’ management of the division of labor in and through GVCs, ‘development’ becomes development for some to the detriment of others and management becomes political, not technical. To simplify, as we see below, GVCs begin to resemble the managerial introduction of the Taylorized production processes of the ‘Gilded Age’ – an age of rampant inequality. How this is achieved in GVCs through the ‘technical’ division of labor is examined next.

5. Technical versus political management: toward a view of management as class struggle from above

Global value chains are essentially elongated technical divisions of labor organized by lead firms seeking to conceive of, execute, and distribute commodities in the most profitable way. This simple statement attests to its political nature. Adam Smith (1981) understood this when he described the pin factory’s new forms of authority and hierarchy. If GVCs, and their attendant smile curve locating greater value added at the R&D and marketing ends of the curve rather than in production (Baldwin, 2016), are a new division of labor then we need to understand the division of labor’s function and its relationship to knowledge. One way to examine management’s relationship to knowledge is through standardization or codification. This manifests itself in GVC literatures as (lead firm) standards and badges of quality from which others can learn (Sturgeon, 2002). However, the original standardization process was a highly political – not technical – struggle between capital/management and labor.

We understand this in relation to GVCs and development through management’s pursuit of standardization and its concomitant concentrating of knowledge to entrench management control. Central here was Taylorism. Standardization heralded a class struggle that, at least initially, redistributed wealth and power away from production (like the smile curve). Two elements are important for our contribution. Firstly, this class war was between craft workers and owners/managers. As is well rehearsed, it destroyed craft workers as a political and industrial force (Braverman, 1974; Negri, 1996). Secondly, and less well rehearsed, it was a conflict between dispersed knowledge and capital’s desire to concentrate it as intangible assets – as systems, intellectual property, branding, finance, etc., areas where mainstream GVC theorists locate ‘value added’ (Baldwin, 2016). These assets enable what UNCTAD (2017) identifies as a new rentier capitalism flourishing through lead firms’ configuration of GVCs (Durand & Milberg, 2018). Viewed this

way, GVCs are not new: Veblen (1908b) examined labor's deskilling and the concentration of its knowledge in managed organizational forms. He also located activities such as branding, intellectual property rights, etc., as distributors *not* producers of value. In ways that reverberate with the smile curve, struggles for control of factories and dispersed knowledge were about managing systems of production that spread beyond any one factory or particular set of workers. They ensured interconnected networks of production and consumption were managed by a concentrated few and resources trafficked accordingly – it was about control over the circuit of capital. Let us examine these points.

5.1. Taylor, the concentration of dispersed knowledge, and the GVC as management of the division of labor

Taylorism encapsulates standardization as redistributed knowledge, power and wealth. This was achieved by expropriating and concentrating dispersed worker knowledge to break nonmarket collective relations (Taylor, 1895, 1903, 1919). He sought this through an increased division of labor, a colonizing management function, and developing new values to legitimate new hierarchies. Importantly, all three traits – ever more detailed divisions of labor, the centrality of the management function, and the creation of new values within labor – are key to GVCs as tools of development. Taylor advocated centralized planning and the routing of work; systematic analysis of each distinct operation; detailed instruction and supervision of the performance of discreet tasks; and wage/reward systems (with punishments) to ensure instructions were followed without deviation. In short, he created a factory-based value chain controlled by management – a prototype GVC.

Taylor sought more than a functional outcome with these new practices. His goal was to crush alternative forms of organization – especially those of dispersed knowledge and labor's self-organization of production. Taylor sought to redistribute knowledge, power and wealth to owners via management planning and standardization. As he expressed it (1903, p. 1390):

All possible brain work should be removed from the shop and centred in the planning or lay-out department, leaving for the foreman and the gang bosses work strictly executive in nature, their duties being to see that the operations planned and directed from the planning room are promptly carried out in the shop.

In this management rendition, labor was increasingly viewed as a homogenous nonvalue adding factor of production because its self-organizing capacities were captured by management and embedded in systems, routines, technologies, and corporate strategies (again, reminiscent of assumptions of the division of labor epitomized by the smile curve). These changes meant workers, as 'intelligent gorilla(s)', were trained to carry out tasks defined and measured by 'a man better educated than he is' (Taylor, 1919, p. 40) – a man who would also innovate, brand, manage, protect IP, etc. (Veblen, 1908b). Management planning created and reinforced elite hierarchy and inequality through concentrating knowledge and empowering property.

Taylorism innovated new production methods to standardize processes, make people inter-changeable, and develop the economy in the Schumpeter (2008) sense – that is re-combining industrial organizational forces, developing new systems of

production and consumption, and reaping entrepreneurial profits. This required deskilled standardized work routines which made workers inter-changeable (and developed new pliant value systems) and (ideally) generated *total* control of production. In so doing, management replaced labor as the value adding function.⁶ For Taylor the customary self-management systems of craft's 'rule of thumb' and the collective setting of the pace of work led to 'systematic soldiering' (the deliberate slowing of the pace of work). Soldiering needed stopping because it retarded economic development and damaged the livelihoods of the poor. With the rule of thumb eradicated, immigrants, females, non-white populations could be better exploited (Montgomery, 1987).⁷ Speaking about soldiering before the House of Representatives, Taylor (1947, p. 19) commented '[workers] rob the people of the wealth that justly belongs to them, whether they restrict output honestly, believing it to be in the interest of their trade, or dishonestly for any other reason'. Such views were common amongst managers and industrialists. Henry Clay Frick suggested it was entrepreneurial management planning, not labor, that improved productivity (Standiford, 2005). Labor did not create the new conditions of the economy, entrepreneurial management did. By concentrating knowledge, authority, and standards, corporations achieved both 'economic development' and tighter control to redistribute wealth upwards. As such, standardized routines, not the dispersal of strategy throughout the organization or its scientific base (Knafo et al., 2019; Dutta et al., 2018), were central to the emerging managerialism.

The consequences of corporate control and the downgrading of production have a direct bearing on GVCs and the smile curve. The explosion of both logistics and supply chain management industries show deep continuity with Taylor's concentrating of dispersed knowledge. Thus, while the proliferation of GVCs from the 1970s has been linked to class struggle in the West, and the shift from a labor friendly to a (neoliberal) 'capital friendly regime', its Taylorist continuity, indeed *evolution*, and spatial expansion need to be emphasized more vigorously. In supply chain management handbooks and development policy documents the GVC, often disguised behind Porter's value chain analysis, is actually an extension of the class struggle waged by scientific management on capital's behalf. What Taylor applied to the firm, is modernized today for the supply chain, and the older 'planning room' is now the headquarters of the lead firm. In supply chain management – the new Taylorism – workers are again mere factors of production as (lead firm) management creates value. In this sense, scientific management, supply chain management and GVCs are the same because all assume the planner/lead firm entrepreneurially creates value. Supply chain management revolves around the central *prescription* to treat supply chains as integrated firms which outsource upward and downward activities that, although carried out by different firms, need to operate as one (Lambert & Cooper, 2000). Thus, the well-known motto, 'the supply chain, becomes the [firm-level] value chain' (Christopher, 2011, p. 13) because it creates large integrated entities. Those managing supply chains scan activities and performances of participants, detect and curb weak points, and improve the overall efficiency, coordination, and synchronization of activities (Fawcett, Ellram, & Ogden, 2007). To survive in our hyper-competitive global economy, supply chains need tight management. In a highly globalized and dispersed production process, the *management* of this scattered environment becomes the 'vehicle through which

competitive advantage is gained or lost' (Christopher, 2011, p. 11), i.e. the very top of the smile curve.

Legitimizing this supply chain management is a win-win scenario, where participants (like Taylor's workers) are managed in their own interests because the 'real competition is not company against company but supply chain against supply chain' (Christopher, 2011, p. 15). In this narrative, the supply chain is like a river flowing across many countries that need to cooperate accordingly (Mentzer et al., 2001). Conflicts internal to supply chains are sources of failure for all participants; cooperation and trust are the way forward. This is also the crux of making GVCs work for development. There is no apparent contradiction between team playing or team leading or between firms that specialize in a particular activity and those who specialize in the *total* control of all activities (Storey, Emberson, Godsell, & Harrison, 2006). As with Taylor's (1949) scientific management, the supply chain is a world of benevolent (supply chain) managers sharing costs and gains with its inhabitants; reflected in Porter's (1985) symbiotic 'value system' of interlaced firms. Even when (rarely) acknowledged, the *pursuit* of adversarial relations and *use* of power in supply chains do not lead to optimal results, whereas a 'thoughtful use of power for mutual benefit can lift the supply chain as a whole' (Reimann & Ketchen, 2017, p. 6, see also Crook & Combs, 2007). Importantly, the vehicle for this to succeed is standardization; something (at least partially) highlighted in Veblen's work and his distinction between the relentless standardization of production and the capacity to control it remotely.

5.2. Veblen, standardization and the creation of networks of production and consumption

The issue of standardization as simultaneously economic development *and* class struggle is central to Veblen's (2013) analysis of organizational change, planning, and entrepreneurial capture. Writing after the 1899–1902 American merger movement, Veblen argued standardization created increasing labor/capital inequality. That is, when capitalist development shifted from craft-based development to mass production it generated destructive organizational re-combinations located in deskilling and inter-changeability. In this regime, development and inequality combined (Veblen, 1908a, 1908b, 2013). Veblen (2013) argued capitalism divided economic organizations along two related but separate axes – the *machine process* and the *business enterprise*. The machine process entailed the managerial pursuit of standardization in the division of labor. It is driven by a desire to make things regular, inter-changeable, predictable, and constant (Veblen, 2013, p. 11). This consistency does not occur in isolation. It penetrates whole economies as producers demand standardization from suppliers and producers, as suppliers, are forced to standardize. It is not exhausted at production with the abatement of labor costs, but seeks to control markets, administrative systems, supplies, quality and logistics. It extends control over the circuit of capital. One sees this in the development of Singer, the sewing machine giant of the early twentieth century. Singer maintained craft-like working conditions longer than most (Hounshell, 1984). However, with its European expansion in Scotland, standardization became increasingly necessary if equipment developed in America was to be compatible and inter-changeable with its European production systems and European customers assured they were

buying quality ‘US’ products. US labor costs alone did not simply drive this process because wages in Scotland were lower. Underpinning this was a desire for greater *overall* control of the organization’s *total* environment. Hence standardization enabled Singer to increase mechanization and, in an early rendition of the smile curve, marketing to convince its European customers that Glasgow-produced machines were the same as US-made ones (it even allowed the French government to appoint an investigator to confirm this). One also sees this growing standardization – an early modular production network (Sturgeon, 2002) – when Singer broke its contract with the sub-contractor The Providence Tool Company. The contract, to make cheaper Singer machines without the Singer brand, was ended because Providence could not meet Singer’s standardization demands – its codified knowledge (Sturgeon, 2002). Potentially this could damage Singer’s brand or the high value ‘horns’ of the contemporary smile curve (Hounshell, 1984).

Veblen (2013, p. 14) called this spreading of standardization throughout economies the ‘concatenation of industrial processes’. What had started as inter-changeability was defining production, consumption, and undermining the dispersed knowledge of labor by placing it in the hands of management through standards, rules, routines, intellectual property rights, brands, etc. Thus, standards are used to exercise control over the circuit of production and once the supplier – Providence Tool Co. – could no longer achieve or maintain standards, it was abandoned as capital relocated to protect its brand. Echoing contemporary GVCs, the weaker capital in the relation (Providence) is controlled via standards and brands to transfer value to Singer (in relation to these contract processors today, see Starosta, 2010b).

Parallel to the machine process, the *business enterprise* entails the deployment of concentrated intangible assets (or knowledge) such as brands, marketing, intellectual property and financial investment/divestment (higher value-added activities in the ‘smile curve’). Veblen (1908b, 2013) argued concentrated ownership and strategic control become dedicated to rent-seeking behavior, arbitrage, and differential advantage – the entrepreneurial ‘search for unexploited opportunities’ (Hayek, 2002, p. 18) to ‘arbitrage across divergences in management strategies, labor conditions, and natural resources’ (Tsing, 2016, p. 335). Here, intangible assets help avoid competition and exert power to extract value that the ownership of said assets cannot itself produce. Whereas the machine process directly confronts the control/management of labor, the business enterprise is only indirectly interested in labor because of a growing separation between ownership and the control of work.

Like Schumpeter’s rendition of entrepreneurship, Veblen’s (2013) business enterprise was not interested in equilibrium, but in *disequilibrium* – recombination, new supply chains, etc. The business enterprise uses standardization embedded in machine processes to look for differentials, arbitrage, or rents. For example, it seeks out differentials between groups, factories, raw materials, transportation, etc. to invest in profitable ventures. Central here is concentrated knowledge allowing strategic control through investment/divestment, exploiting brands and goodwill, or intellectual property because they allow ‘vendible capital’ (Veblen, 1908a, 2013) to shift resources and exploit opportunity. In today’s ‘supply chain capitalism’, the business enterprise searches for diversity in labor regimes (Tsing, 2009) and machine processes enable such scanning for opportunity by facilitating measurement, comparison, and interchangeability. Meanwhile the business enterprise reaps the advantages of disequilibrium and exploits crisis.

The direct control of labor in the machine process is essential but ultimately secondary to the entrepreneurial value capture of the business enterprise. As such, management is now concerned with two forms of conflict, the machine process conflict between capital and labor and the business enterprise conflict between capital and capital, which always seek to capture value from organizations in their orbit or value chain (Starosta, 2010a, 2010b). Whilst he was discussing powerful finance capital rather than lead firms, Veblen (1908b, p. 133) expressed it thus: ‘the old fashioned capitalist-employer loses his discretionary initiative and becomes a mediator, an instrumentality of extraction and transmission, a collector and conveyer of revenue from the community at large to the pecuniary magnate [presently lead firms], who, in the ideal case, should leave him only such an allowance out of gross earnings collected and transmitted as will induce him to continue in business’. Today, we argue, such a relationship is increasingly sought by lead firms, e.g. the use of ‘cost plus’ arrangements demanded of suppliers where suppliers open their books so lead firm buyers can discern what they see as a reasonable profit. So, whilst the machine process works to obtain equilibrium in production, the business process works to create disequilibrium and crisis between different (and possibly competing) production processes to syphon value.

6. Conclusion – reading GVCs through the lens of management theory

Global value chain organized divisions of labor and the smile curve are the modern reproduction of the disjuncture between the business enterprise and the standardizing Taylorist machine process. Lead GVC firms specialize in the business enterprise core activities i.e. marketing, branding, R&D, and logistics and supply chain management. The latter two are today an area of fierce competition between firms, with huge corporations like Wal-Mart, Tesco, and Ikea leading the way. Their success presupposes managers, i.e. a lead firm buyer, holding tight control and having vast knowledge of supply chains, branding, marketing, IP etc. These buyers ‘rule from the tops of skyscrapers; on a clear day, they can almost see the world’ (Hymer, 1970, p. 442). If correct, then GVCs concentrate knowledge, control production at a distance via standards, measurement and comparability, search for disequilibrium, and rent-seek to capture and redistribute value away from labor and weaker capitals. In one sense, they act like Schumpeter’s entrepreneur in that they develop economies in unequal ways. However, in another sense – more Veblen-like – they use their power to capture value rather than create it. As such, GVCs are a suspect path to development.

Management here embodies class struggle. This is most obvious via standardization and codified concentrations of knowledge that create divisions of labor between low and high value adding activities – the horns of the smile curve. So whilst production scatters, lead firms specialize in intangible activities, e.g. IP rent, ‘tolls on GVC integration’ (Durand & Milberg, 2018, p. 31), and supply chain management. The latter pivots on massive lead firm concentrations of knowledge: knowledge of markets (such as in buyer-driven oligopsonistic and oligopolistic value chains); knowledge of internal divisions of labor in value chains (i.e. who does what) to improve the flow and monitor the performance of each firm (that is managed via a system of rewards), including inclusion/exclusion in/

from chains; and knowledge of possible sources of disequilibrium. All this knowledge is concentrated through power relations – ‘chain governance’ and market power – that in turn enforce IT infrastructures (standardization) vehiculating orders to suppliers and simultaneously gathering information on their operation and coordination, de facto coordinating and controlling production and exchange within and between them and thereby extending control over more of the circuit of capital. Here, production does not emerge out of a passive technical cost-reduction exercise, but expresses instead an active strategy of capitals-in-competition squeezing labor and/or undermining the conditions for working class collectivities. In sum, standardization is a class-relational dynamic within and between firms. Whilst entrepreneurial in the Schumpeterian sense, it creates uneven development and redistributes value to specific groups, i.e. corporate executives and asset owners. In this analysis, upgrading becomes impossible for all – a ‘developmental illusion’ (Arrighi, 1990).

Notes

1. It is worth noting that even early on in the development of the GVC literature this assumption was questioned (Raikes, Jensen, & Ponte, 2000, p. 403).
2. On this issue Schumpeter (2008, p. 228) talks about clusters of entrepreneurs leading others or guiding the economy towards greater and greater entrepreneurship.
3. Whilst this may be true, it is important to ask whether or not these successful firms then develop the country. Nolan’s (2012, p. 21) argument is that even large successful firms in GVCs remain subservient via what he calls the ‘cascade effect’ wherein oligopolies exist even in lower tiers of the supply chain. Picking the example of a (Foxconn-) assembled i-phone in China, Gereffi (2014) further shows how little value is captured at the country level. Most importantly, in relation to the Foxconn ‘success story’, Pun and Chang systematically demonstrate the extensive extraction of value from workers to capital (Pun & Chan, 2012; Pun et al., 2016).
4. This is not to say these labour group differences are unimportant. They are central in an economy that ‘creates difference in connection’ (Tsing, 2016). In the next section, we link such exploitation of difference to a division of labour that is standardised to make labour a homogeneous raw material where differences are arbitrated.
5. We would like to express our indebtedness to one of the reviewers for highlighting this point.
6. Taylor is a further development of the long-standing tendency amongst bourgeois theorists to collapse labour into the value creating category of capital (Meiskins Wood, 2016, pp. 146–78).
7. Most white immigrants were not considered straightforwardly ‘white’ by dominant groups (Robinson, 1983; Roediger & Esch, 2012).

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