ANALYSING FINANCE AND PRODUCTION

IN THE CONTEMPORARY CAPITALIST ERA

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12 September 2014

This paper has been prepared for presentation to one of three panels organised by the authors for the 5th Annual Conference of the International Initiative for the Promotion of Political Economy (IIPPE), 16-18 September 2014, Università degli Studi di Napoli "L'Orientale", Naples, Italy.
The paper should be read as a work-in-progress.
The paper forms part of a larger project initiated by the authors –
The Restructuring of Production in the Era of Financialisation (RPEF)
This project has a growing global network of researchers. If you would like to know more about the project and/or to join the research network please contact:
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ABSTRACT: *There has been a dramatic restructuring of the global economy as the dictates of neoliberalism have reconfigured the contemporary capitalist system of accumulation which has involved a seismic shift from industrial to finance capital. There have been a number of important contributions to theorising this shift and about the empirical relationships between the 'financial' and the 'real' at the levels of the nation-state and the firm. To a far lesser extent, the impact of financialisation upon production - at the level of industrial sectors, commodities, firms or global production networks - has been the subject of empirical research. Consequently, articulation of the abstract relations between finance and industrial capital, and the concrete forms that this takes in contemporary capitalist accumulation, are under-theorised. This paper posits an approach to bridge the gap between the abstract and concrete by presenting an analytical framework for empirical research to elucidate the different ways in which financialisation has restructured production and the ways in which finance and production in the contemporary era work together in reinforcement and/or contradiction.*

Key words: accumulation, financialisation, production, *Régulation* theory, systems of provision approach

JEL codes: B51, L16, P16

1. INTRODUCTION

Global capital accumulation over the last three decades has involved a qualitative shift in the articulation between finance and industrial capital played out through the co-constitutive processes of neoliberalism, financialisation and globalisation. A number of important contributions to theorising this shift have appeared in the recent literature (e.g. Fine 2010; Lapavitsas 2011, 2013; Saad-Filho 2011). There also has been a significant growth in literature on the empirical relationships between the 'financial' and the 'real' at the levels of the nation-state and the firm (e.g. Crotty 2003; Hein & Till Van Treeck 2010; Krippner 2005; Orhangazi 2008; Stockhammer 2004).

To a far lesser extent, the relationship between financialisation and the restructuring of production within specific industrial sectors, global production networks, firms and commodities has been the subject of empirical research (e.g. Baud & Durand 2012; Froud *et. al* 2006, 2012; Gibbon 2002; Montalban & Sakinç 2013; Newman 2009a; Palpaceur 2008). Consequently, articulation of the abstract relations between finance and industrial capital and the concrete forms that this takes in contemporary capitalist accumulation remain under-theorised.

Bridging the gap between the abstract and concrete, this paper posits an analytical framework for empirical research to elucidate the different ways in which financialisation and the restructuring of production work together in reinforcement and/or contradiction. The aim of our analytical framework is both to inform empirical research to facilitate a systemic understanding of contemporary capitalist accumulation and, in turn, to contribute to the theorising of the dynamics and relations of accumulation based upon substantive empirical evidence.

The posited framework is informed by multiple approaches, each of which provides insights at different analytical levels. Drawing from the key propositions of each approach, core properties are identified which foreshadow a set of analytical questions. We deploy these questions to develop a 'financialisation grid' for the interrogation of the concrete nature of the relation of financialisation to the structure, operation and outcomes of industry sectors (through their markets, participant firms, commodities, and relationships with other sectors). The analytical grid is not a rigid typology given the different levels at which empirical analysis should be conducted. Nor does it presuppose the presence or otherwise of particular mediating factors at all analytical levels because the empirical evidence to date has shown the diversity and heterogeneity which sector-specific modes of financialisation may take.

This analytical grid provides an innovative prism for empirical analysis which does not overlook sectoral specificities, such as interconnections between sectors nationally and globally, and does not exorcise the analysis from the economic and social structure of capitalism.

The paper is structured as follows. Section Two explores the differing conceptualisations of financialisation across the literature and suggests a more abstract definition is required for the proposed research task. Section Three presents an overview of empirical studies of the impacts and consequences of financialisation and, in so doing, explains the lacunae which is apparent in the discourse. Section Four scopes the research task and the requirements of an analytical framework before outlining the insights and issues, in terms of the research task, of five analytical approaches (*Régulation* theory, systems of provision approach, commodity chain constructs, the *filière* approach and market analyses) and from which a 'financialisation analytical grid' is proposed. A final section concludes.

2. CONCEPTUALISING FINANCIALISATION

Finance has long played a central role in the economy rendering goods or services into an exchangeable form and thus, facilitating trade. Since the 1970s or so, finance has moved beyond this traditional role and the extent of its influence has been observed through several empirical dimensions including: the large-scale expansion and proliferation of financial markets over the last 30 years leading to a three-fold growth in the ratio of global financial assets to global GDP (Blankenberg & Palma 2009); the de-regulation of the financial system since the 1970s; the expansion and proliferation of financial instruments (futures, derivatives, sub-prime mortgages, securitisation etc) associated with the creation of a wide range of financial institutions and markets; the increasing share of national income from the financial sector as the profits of non-financial firms have been increasingly derived from their financial not productive activities; the marked increase in the share of national capital stock from intangible assets; the distinct shift in national income shares from wages to profits and a significant rise in the ratio of managerial remuneration to employee income, and rising income inequality (OECD 2008); the penetration of finance into a wide range of economic and social activities (housing, health, superannuation, education) and into the environment through the creation of carbon trading markets; and an ethos of reliance on the market and the use of the state as an 'agent of last resort'.

Much has been written about the observed realignment of capitalism towards financial markets, the emergence of 'money manager capitalism' and the rise of the 'global financial system'. This discussion of the nature and dynamics of contemporary capitalism has been increasingly framed around the term 'financialisation' to describe how finance has come to dominate the operation of the real economy and permeate almost every sphere of social and cultural activity (Christopherson *et.al.* 2013).

Definitions of financialisation throughout the literature generally refer to it in a concrete sense being a phenomenon, having processes, forms, mechanisms or measures, and leading to effects and consequences. Sawyer (2013: 16) suggests financialisation should be viewed either "in terms of the object of study in the broad terms of the quantitative and qualitative evolution of the financial sector and the role of finance" or "a new epoch or stage of capitalism". We agree that some definitions do point to such a dichotomy although not all can be so easily categorised and nor are concretised definitions always suitable to the analytical task as we explain below.

One widely cited – and broad - definition is that proffered by Epstein (2006: 3) with financialisation seen as "the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies". Writing around the same time, Krippner (2005: 174) defined financialisation as "a pattern of accumulation in which profits accrue primarily through financial channels rather than through trade and commodity production" which she measured through the relative importance of revenue sources for non-financial firms and that of the financial sector "as a source of profits for the economy comparing financial to non-financial profits" (*ibid.:* 182).[1]

The notion of financialisation as a 'regime of accumulation' or 'stage of capitalism' is also posited by *Régulationist* scholars (Aglietta 2000; Boyer 2000, 2013) and those of the Social Structure of Accumulation tradition (Kotz 2010). Others have suggested financialisation to be "a new hybrid phase of the monopoly stage of capitalism" (Foster 2007: 1) and a "systemic transformation of mature capitalist economies" (Lapavitas 2011: 611).

Further empirical conceptualisation of financialisation is evidenced by Stockhammer (2004: 270) who refers to the "increasing activity of non-financial business on financial markets … [and] "the rise of incomes from financial investment". Similarly Dumenil & Levy (2004) point to the increasing political and economic power of a *rentier* class whereas some ten years earlier the growing prevalence of financialisation was seen as the explosion of financial trading (Phillips 1994).

Others have defined financialisation as a distinctly changed relation between finance markets and large non-financial corporations with, for example, the NFC being conceived as a 'portfolio' of liquid assets to be used to maximise continually maximise the stock price instead of the more traditional view of "an integrated, coherent combination of illiquid real assets assembled to pursue long-term growth and innovation" (Crotty 2003: 272). A further definition, and commonly adopted, is the conflation of financialisation with the changes induced by the ascendancy of 'shareholder value' as a mode of corporate governance (Lazonick & O'Sullivan 2000). In addition, financialisation has been equated with the use of financial innovation (e.g. securitisation, derivatives) to convert illiquid to liquid assets to reduce risk and increase the mobility and volume in financial assets trading (e.g. Allen & Pryke 2013; Toner & Coates 2006). This latter group of definitions, in our view, are more concerned with the *mechanisms* of how financialisation occurs i.e. the means used to facilitate the penetration of finance into ever more areas of economic and social reproduction.

Throughout the literature, there is generally widespread use of empirical concrete phenomena around which definitions of financialisation are framed. Another relatively

[1] A few years later, Krippner (2011: 27) similarly refers to financialisation as "the growing importance of financial activities as a source of profits".

common occurrence, with the exception of some scholarship of financialisation as an accumulation regime, is the conceptualisation of this phenomenon as being static – it occurs, becomes embedded, and remains in some fixed form over time. There is also a tendency to perpetuate a binary treatment of financial and non-financial firms with the former acting as an exogenous force on the latter. In other words, financial firms are the agents of financialisation subjecting non-financial firms to this pressure. Not only does this express a one-way causality, it reinforces the binary distinction of firms and attributes any shift in productive organisation solely due to the calculative logic of non-financial firms.

This raises another aspect about causality and in particular, the causal relationships between neoliberalism, globalisation and financialisation. In Fine's (2013: 57) view financialisation "has become the most prominent characterization of the current [neoliberal] period of capitalism" with globalisation being the other stand-out feature. The genesis of financialisation, according to Kotz (2010), lies in neoliberal restructuring and "the leadership of finance has been identified at the root of neoliberalism and the internationalization of capital (Dumenil & Levy 2005: 17). These views, however, invoke a sense of one-way causality between the political and economic doctrines of neoliberalism and the phenomena of financialisation and globalisation.

Within a literature dominated by 'empirical conceptualisations' a small group of contributions have presented a more abstract understanding of the process and outcome of financialisation particularly from a Marxist perspective. Financialisation is viewed as the result of fictitious capital 'pushing aside' industrial capital and thus causing a shift in the alignment of the spheres of production and circulation (Blackburn 2006; Leyshon & Thrift 2007: LiPuma & Lee 2005). Thus competition and outcome is seen, in part, as reflecting the dialectical nature of the relation between the credit system and real (productive) capital. The credit system, which plays a pivotal role to the process of exchange in the circulation sphere, can both reduce the turnover of industrial capital and undermine capital accumulation if surplus value is appropriated instead of channelling it into investment in productive capital and the generation of surplus value. This is an inherent contradiction of fictitious capital within the money circuit of capital, and the creation of more and more complex financial products has vastly expanded the sphere of circulation and increasingly circumvented the sphere of production. Thus, according to this logic, a greater share of value is going to that part of money capital (money to make more money or IBC, interest bearing capital) not used to finance the expansion of industrial (productive) capital.

Although more complex and abstract than the more commonly found conceptualisations of financialisation, this latter approach does provide a useful starting point towards theorising about the relationship of the three phenomena of financialisation, globalisation and neoliberalism to the dynamics of the accumulation process which is critical, along with comparative empirical studies, if we are to develop a systemic understanding of contemporary capitalist accumulation.

We view financialisation as a multi-dimensional phenomenon, with differing scales of incidence and effects, grounded in the political and economic doctrines of neoliberalism and one of the defining features of the contemporary era of neoliberal capitalism. This phenomenon, like that of globalisation, we also view as having a co-constitutive dialectical relationship with neoliberalism, i.e. the political and economic ideology of neoliberalism has driven the processes of financialisation which in turn shape or may run counter to neoliberal ideas and principles. Similarly, we assume - until there is substantive evidence to the contrary - a co-constitutive relationship between finance and production working together both in reinforcement and possible contradiction. This is consistent with our view of the capitalist economy organised around the accumulation of capital through the production, circulation and distribution of surplus value, and the contradictions inherent to the process of capital accumulation.

For the above reasons, we concur with Fine's (2013a: 55) definition of financialisation as the "intensive and extensive accumulation of fictitious capital or, in other words, the increasing scope and prevalence of IBC in the accumulation of capital". By 'intensive' is meant "the growth and proliferation of financial assets themselves with increasingly distant attachments to production and exchange of commodities themselves" (*ibid:* 47). 'Extensive' refers to the increasing spread of new forms of IBC across the areas of social and economic reproduction.

This conceptualisation of financialisation is not bound by empirical phenomena and allows us to move from the abstract to the concrete, does not presuppose one-way causality between financial and non-financial firms, and does not assume that the processes, mechanisms or forms of financialisation are static over time or that exogenous forces drive the processes of financialisation. Thus, the research task is underpinned by a definition which does not pre-empt findings by constraining assumptions nor limits the analysis to any particular process or mechanism of financialisation or only empirical outcomes. This conceptualisation provides sufficient scope to develop a systemic understanding – based on empirical evidence – of the effects of financialisation on productive activity and the contemporary process of capitalist accumulation and thus facilitate the use of the empirical to contribute to the theorising of the dynamics and relations of accumulation.

3. EMPIRICAL STUDIES OF FINANCIALISTION

A number of research areas have emerged, during the last three decades, about the phenomenon of financialisation which are distinguishable by their methodologies and analytical levels.

First, *Régulationist,* post-Keynesian and economic sociology studies have observed significant changes in the institutions and structures of capitalism arising from the declining profitability of manufacturing in advanced capitalist economies, and the growing financial activities of non-financial firms, leading to a characterisation of financialisation as the regime of accumulation to succeed Fordism (e.g. Boyer 2000, 2013; Kotz 2010).

Second, macro level studies have demonstrated the increase in financial investment and the simultaneous slowdown of the accumulation of physical assets i.e. 'real' investment (e.g. Crotty 2003; Krippner 2005; Orhangazi 2008; Stockhammer 2004). In addition, there have been specific country studies of the ways in which financialisation has worked itself out at national levels (e.g. Epstein 2005: 243-353).

A third research area centres on financialisation of the modern corporation. Shareholder value is attributed to the shift in corporate governance, since the 1980s, to maximise profit for shareholders rather than to retain earnings for productive expansion (e.g. Aglietta 2000; Lazonick & O'Sullivan 2000). A handful of empirical studies have focused on the business strategies of giant US and UK firms (Froud *et.al.* 2006, 2012).

Another area of research focuses on how financialisation processes have shifted risk from large firms and institutions to individuals, households and everyday life (e.g. Martin 2002; Rafferty & Yu 2010; Sennett 2006). More recently, the spatial dimensions of financialisation have been considered (e.g. Coppock 2013) along with the impact on production innovation (Berger *et.al.* 2014).

While these studies have revealed the relationships between finance, profit and production, research about financialisation has fallen short of providing a systemic explanation of the structural transformation of national economies over recent decades (Lapavitsas 2011). Empirical analyses, with few exceptions, have not specifically considered how production has been restructured in response to the primacy of profit and financial imperatives nor – and equally important - the role which the restructuring of production has played to sustain the phenomenon of financialisation. These analyses have predominantly been conducted at the macro level through a quantitative finance 'lens' with attention to production limited to financial investment being privileged over productive investment (e.g. Stockhammer 2004). This raises two critical issues.

First, the juxtaposing of the financial and the real obscures the nature of the symbiotic relationship between finance and production and the restructuring of capital itself in the process of accumulation. Financialisation has impacted differently on national economies because of their differing structures and development levels. Equally, it has become integrated and embedded in different ways across different industrial sectors. Hence, we cannot understand this phenomenon in terms of finance versus the rest of the economy. Financialisation needs to be understood and theorised as a phenomenon that encompasses distinct processes which characterise the form of production and capitalist accumulation that has developed over the last three decades. In this way, financialisation works in a co-constitutive manner with the other global phenomena of neoliberalism and globalisation in its impact on capitalism.

Second, the complexity of the structural transformation of production, and thus the implications for the ongoing accumulation process, has been precluded by the analytical level adopted by past studies. Financialisation studies have been skewed towards analysing national accounts to illuminate the changed macro savings-investment relationship brought about, in part, by changes in investment decisions of non-financial firms as a result of new financial imperatives (e.g. Krippner 2005; Orhangazi 2008). Industrial organisation studies, within the globalisation discourse, have focussed heavily on the rapid growth and increasing consolidation of transnational corporations (TNCs), and the vertical de-integration and fragmentation of production globally with the rise of commodity supply chains (e.g. Milberg & Winkler 2013). To fully understand the implications of financialisation and globalisation on the organisation of production, empirical analysis needs to be extended to the level of sectors and the production of specific commodities within those sectors.

There have been a few notable exceptions to the tendencies within the analytical literature mentioned above that specifically focus on the ways in which the structure of production and the financial practices of firms have become increasingly related. These industry studies have been of global retailers, clothing and coffee supply chains, the pharmaceutical industry (Baud & Durand 2012; Froud *et al.* 2012; Montalban & Sakinç 2013; Newman 2009a; Palpacuer 2008), and outsourcing by firms (Milberg 2008). These studies reveal that the global process of financialisation takes a variety of concrete forms that depend upon the financial imperatives faced by a firm and the opportunities to engage in financialised accumulation. Both imperatives of, and opportunities for, financialisation interact critically with the structure of the given industry and market, themselves contingent on the material nature of the product.

The modes of financialisation (the avenues for financialised accumulation available to firms/actors) and their interaction with how production and distribution is organised are therefore heterogeneous and sector specific. For example, Newman (2009a) found that international coffee trading houses reoriented their business strategies towards financialised accumulation through speculative hedging – the practice of hedging on derivatives markets for the purposes of making profits directly from trading in financial instruments. Trading companies faced greater imperatives for seeking out profits from financial activities owing to the erosion of profit margins in trading. At the same time, opportunities to profit from futures trading increased with the collapse of the International Coffee Agreement, the prior restructuring of the sector towards greater concentration, and the liberalisation of coffee marketing systems in producer countries. The process of financialisation involved changes in the contractual arrangements between traders and coffee producers that resulted in the redistribution of price risks at the expense of producers and the redistribution of surplus in favour of international traders.

While similar avenues for financialised accumulation and impacts on the social relations along supply chains might be found in other primary commodity supply chains where developed and liquid derivatives markets exist, the mode of financialisation and its interaction with the structure of production and distribution can differ for different sectors. Milberg (2008) showed that the off-shoring activities of US 'productive' firms coincided with increases in financial investment. Off-shoring, and increasingly arms-length contractual arrangements, allowed firms to reduce the input and operating costs, transfer production risks to subcontractors, and reduce productive investments necessary for in-house production. The organisation of production thus freed up financial resources that could be used for share buybacks and the acquisition of financial assets and increase (financial) profits without production. Since coffee trading companies have not traditionally invested directly in production to any great extent, there was no opportunity to divest in order to free up funds for the acquisition of financial assets. Moreover, the largest coffee trading companies are not publically listed and thus not subjected to the same kind of shareholder value imperatives of listed companies.

In their study of the highly concentrated sector of global retailers, Baud and Durand (2012) found a mode of financialisation distinct to the industry owing to the specificities of supplier relations. By increasing the time between sales and receipt of payment, global retailers appropriated 'free' short-term credit from their suppliers which they then channelled into short-term financial investments. The trade partner 'net' account of the top 10 global retailers increased from 30 days of sales in the early 1990s to 43 days in 2007. The ability of lead firms to appropriate 'free' credit from suppliers is distinct in retail owing to the structural asymmetry that arises because payments made upstream occur with a lag whereas payments are made at the point of purchase downstream that allows retailers to finance payments with supplier liabilities.

Both Palpacuer's (2008) study of the garment industry and the Froud *et. al* (2012) study of the Apple business model, show how the imperatives for divestment in productive activities of lead firms and the squeezing of profit margins of suppliers have restructured the relations of work in supplier firms with serious negative impacts on working conditions and increasingly precarious contractual arrangements for workers.

Overall, these recent studies focusing on the interactions and interdependencies between financialisation and the organisation of production reveal the heterogeneity and variety of the modes of financialisation and the structure and restructuring of the relations of production across sectors, commodities, geographies and institutional contexts. It is our contention that detailed empirical study of the interactions between financialisation and the restructuring of production will allow us to better theorise processes of financialisation and capitalist accumulation in the contemporary era. But first we need an analytical framework to conduct empirical studies.

4. TOWARDS AN ANALYTICAL FRAMEWORK

If a systemic understanding of the impact of financialisation on the restructuring of production is to be developed, we suggest that empirical analyses should be framed by the following criteria. The nature and impact of financialisation should be studied through a 'lens' of production not finance. Empirical analyses should be conducted at the level of sectors not national economies. Moreover, comparative sector analyses need to be undertaken and not be confined to the study of a single commodity or a single firm. A multiple-case design is far more robust than a single case because the evidence from multiple cases is much more compelling from which to draw a set of propositions and generalisations. Empirical analyses also need to overcome a geographical bias towards the US and UK by conducting comparative sector case studies for developed *and* developing economies. An analytical approach is needed that considers a wider set of influences than commodity chain analysis, the dominant approach of commodity studies, and draws on both quantitative and qualitative data avoiding sole reliance on econometric modelling as have many past macro financialisation studies.

Mainstream economic analysis commonly constitutes finance (the study of financial markets and investor behaviour) and production (the study of industrial organisation and firm behaviour) as two separate fields. Empirical studies also commonly rely on a single framework which limits analysis to one level such as an economy, sector, firm or commodity. However, financialisation is denoted by several different dimensions which have impacted at multiple levels - global, national, sector, industry, market, commodity, firm, household and individual.

Therefore, the scope of the research task requires an analytical framework able:

[a] to integrate finance and production;

[b] to take into account different sectoral specificities including firms operating in more than one industrial sector and globally;

[c] to be applied at multiple analytical levels (sector, market and commodity);

[d] to explain structural change arising from multiple factors over time and at different levels because a sector produces multiple commodities, interconnects with multiple markets, comprises a large group of firms, provides inputs to other sectors, and is integrated with export and import markets; and

[e] to relate concrete forms of financialisation and the restructuring of production with abstract theoretical explanations of contemporary capital accumulation.

Given these requirements and the limitations of adopting a singular approach, we interrogate several approaches to the study of industrial organisation in order to establish their potential analytical purchase in the investigation of the parallel processes of financialisation and the restructuring of production in the contemporary capitalist era. Here we consider two conceptual and analytical frameworks (*Régulation* theory and the systems of provision approach) and three analytical tools (commodity chain constructs, the *éère* approach and market analyses).

The analytical challenge lies in the articulation between enquiry conducted at macro and micro levels, that is, the theoretical reconciliation between capitalism as a macroeconomically coherent production-distribution-consumption relationship and the structure of its constituent parts without privileging a particular direction of causality either from macro to micro, or the other way around. The study of the constituents of the capitalist system, the units of production, has typically focussed on the firm and the relationships between firms.

Régulation theory and the systems of provision approach are regarded as middle-range theories which reject abstract general principles and are "based on intermediate concepts with a more immediate identification with concrete phenomena" (Mavroudeas 2012: 308). *Régulation* theory originates from critical consideration of Structural Marxism and Kaleckian macroeconomics and favours an explicitly historical materialist methodology as does the systems of provision approach which retains Marxist value theory and its theory of production (Boyer 2002a; Boyer & Saillard 2002; Newman 2012). These two conceptual approaches are also consistent with our view of the capitalist economy organised around the accumulation of capital through the production, circulation and distribution of surplus value, and the contradictions inherent to the process of capital accumulation.

Commodity chain constructs, the *filière* approach and market analyses are analytical tools which have been utilised by a wide range of theoretical traditions although some *filière* scholars have integrated insights from *Régulation* theory and the method of market analyses is more reflective of institutionalism.

In the discussion to follow in this section, we outline the core properties of each of these conceptual approaches and analytical tools which, we contend, foreshadows a set of analytical questions to conduct empirical analyses at different levels – a sector, a commodity, a firm and a market. If the object is to examine the impact of financialisation, we posit that each set of analytical questions needs to incorporate specific questions focusing on the processes, forms and mechanisms which reflect the phenomenon of financialisation. This raises two important points.

First, the impact and consequences of financialisation on production cannot be analysed solely through a set of 'financialised analytical questions'. The spread and implications of this phenomenon, we argue, can only be understood and theorised if those questions are posed within a wider set of analytical questions about the object of analysis. To do otherwise presupposes, in our view, some form of causality between financialisation and production and ignores co-constitutive relationships between financialisation and other factors which impact on the organisation of production such as the phenomenon of globalisation.

Second, the analytical questions which we pose to reveal the relationship of financialisation to the restructuring of production should not be regarded as definitive and immutable. We regard the phenomenon of financialisation as constantly evolving and in many respects as being somewhat 'hydra-headed'. This analytical approach actually helps to reveal the pertinent questions which differ and change according to historical, geographical, institutional, sector and scalar specificities. Hence, the 'financialised questions' which we pose should be regarded as indicative of the analytical questions which a researcher needs to ask and should be adjusted to take into account the changed forms and processes of financialisation which occur over time

Following this discussion of the conceptual frameworks and analytical tools, the respective insights which they each may bring to an empirical analysis and the issues arising in their use, we draw from the analytical questions of each to propose a 'composite financialisation analytical grid'. This grid can be applied at different analytical levels without excising the object of analysis from its broader context within capitalism which can facilitate a more systemic understanding of contemporary capitalist accumulation and, in turn, contribute to the theorising of the dynamics and relations of accumulation based upon substantive empirical evidence.

4.1 *Régulation* theory

Régulation theory seeks to explain the changes which characterise the distinctive trajectories and dimensions of capitalist economic growth and development over time. Structural change is explained by analysing the mode of *régulation* of a capitalist economy which supports and secures capital accumulation through a conjunction of institutional forms (wage-labour nexus, monetary regime, form of competition, international relations and form of the state). The dimensions of these institutional forms are not limited to economic factors encompassing a far wider range including social, political, spatial, cultural, organisational, technological and historical factors.

A dominance of particular institutional forms has been found to characterise different (macro) modes of *régulation*. The mode, evident from the end of the second World War until the 1970s and commonly referred to as Fordism, is dominated by the wage-labour nexus (collective wage negotiations) and, to a lesser extent, the monetary regime (strong growth of credit money). Since the late 1970s, the monetary regime (depicted by financialisation) and "the internationalisation of competition" have replaced the dominance of the wage-labour nexus (Boyer & Saillard 2002: 39).

Figure 1 shows the relationship of the mode's five institutional forms. The state is not viewed solely as an institutional form but one that also plays a significant role in securing the other institutional forms and their overall complementarity by relating to the mode in two ways - it works *within* the mode by supplementing and reinforcing the other institutional forms and it acts *on* the overall mode, a key mechanism for which is economic policy. Nor do the other institutional forms operate in isolation. It is after all the structural configuration of the wage-labour nexus, monetary regime and competition *in relation to each other* which has ensured "the remarkable resilience of the capitalist mode of production" (Boyer 2002b: 73). The wage-labour nexus and monetary regime (as do the state and international position) impact on profitability conditions. The interaction between these two institutional forms and the form of competition means that changes, for example, in the latter can also accompany or cause changes in either of the former.

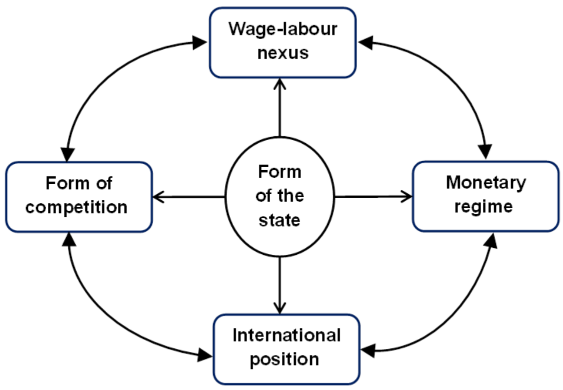

Figure 1: The institutional forms of the mode of *régulation.*

A framework of analysis at the level of the macro economy is immediately apparent given the mode of *régulation* can be explained through the empirical representation and conjunction of its five institutional forms *over time*. The extensive range of factors which define each institutional form means that the concrete manifestation of each is not limited to, for example, output, investment or employment and a far more holistic picture can be evidenced.

Although generally regarded as a macroeconomic theory, *Régulation* theory also has been applied to meso-economic analysis focusing upon large sectors of productive activity.[2]

[2] Sectors have included wine, agriculture, computers and communications, telecommunications, building and public works, and the services sector (see Chester 2007: 64). The geographic focus of these sector studies has been primarily France and Europe with two exceptions being US agriculture and Australian electricity.

The *Régulationist* method of sector analysis, crafted by Boyer from Bartoli and Boulet's study of the French wine sector (Saillard 2002), requires the identification of the following four elements: (1) a sector's social and historical origins, and its collective actors and spatial implications; (2) the institutional arrangements that both define the sector and enable it to function; (3) the sector's place in the accumulation regime and macroeconomic interdependences; and (4) the drivers or points which cause transformations of the sector and the overall economic system.

These elements define the core properties of the nature, structure and interrelationships of a sector of production which can be delineated in detail by applying a set of analytical questions as outlined in Table 1. The questions are framed very generally and need to be applied in ways which will enable an historical dynamic analysis of a sector's development, functioning and position within the mode of *régulation* over time.

It is apparent that a *Régulationist* sector analysis requires two levels of analysis - first, the five institutional forms of the macro economy's mode of *régulation* and their conjunction; and secondly, the sector's reflection of these macro institutional forms. A sector's dynamic will be determined by its own sector-based aspects (institutional arrangements) *in conjunction with* its place in the accumulation regime. This means that the sectoral mode of *régulation* can only be understood in terms of the macro mode. It cannot be understood purely through analysis of a five-dimensional grid. If we are to understand the sectoral impact of financialisation on production, a sector analysis situated within a macro analysis is required.

TABLE 1: Analytical questions to conduct a *Régulationist* sector analysis

ELEMENTS REQUIRED	ANALYTICAL QUESTIONS
A sector's social and historical origins, and its collective actors and spatial implications.	• What was the impetus for the sector's development? • What has been the sector's historical pattern of development? What has been the nature and dimensions of structural change within the sector? How does this compare internationally? • Who is involved in the sector (e.g. firms, organisations, trade unions)? Has this changed over time? What role does the state play? • How has the sector's development impacted spatially? Are there regional implications?
The institutional arrangements that both define the sector and enable it to function.	• What is the sector's representation of each of the institutional forms of the mode of *regulation*? • How does the conjunction of the institutional forms at the sector level compare to the macro mode?

ELEMENTS REQUIRED	ANALYTICAL QUESTIONS
The sector's place in the accumulation regime and macroeconomic interdependences.	• What is the economic and social significance of the sector (e.g. level and forms of employment; productivity; capital expenditure; contribution to economic growth and standard of living, including general price levels)? • What is the interdependence between this sector and other sectors of the macro economy? • What is this sector's relationship to import and export markets?
The drivers or points which cause transformations of the sector and the overall economic system.	• What have been the drivers of the sector's structural change over time? • How are these drivers different from, or similar to, those driving macroeconomic structural change over time?

The second element of the *Régulationist* four-point method – identification of 'the institutional arrangements that both define the sector and enable it to function' – will be established through determining the answers to two questions: what is the sector's representation of each of the institutional forms of the mode of *régulation*; and, how does the conjunction of the institutional forms at the sector level compare to the macro mode. This will require a deep empirical analysis (for example, see Chester 2007) which considerably dwarfs the analysis required to answer each of the other questions listed in Table 1. We contend that this extensive analysis will yield answers to all the other questions posed if that analysis is framed with those questions in mind.

To undertake such an analysis, and if we are to locate financialisation within this analysis, two further important steps are essential.

The next step is to develop detailed descriptions of the concrete manifestation of each institutional form of the mode of *régulation,* evident during the contemporary era of capitalism, for the macro economy of the sector to be analysed. Descriptions will usefully provide parameters for the research task and focus the analysis by delimiting each institutional form to its prime dimensions including the most significant relationships with other forms. If we are to locate financialisation in the analysis, these descriptions need to include relevant processes, forms and mechanisms of financialisation.

Table 2 presents a high-level articulation of each institutional form of the macro economy's mode of *régulation* and outlines a set of analytical questions framed to reveal the impact of financialisation within each form and, through their conjunction, on the mode. These analytical questions are framed broadly and need to be applied to enable an historical dynamic analysis which will concretise how the mode of *régulation* has become financialised. It should be stressed, however, that these 'financialisation' questions need to be posed within a broader set of analytical questions to yield an in-depth picture of the mode in the contemporary era. The spread and implications of financialisation will not be fully exposed unless situated within the other characteristics and features of each institutional form. In this way a comprehensive account can be presented of the relationships and interactions of the financialised mode of *régulation* which will also indicate the ways in which different factors are reinforcing or working in contradiction.

TABLE 2: Analytical questions to reveal financialisation of the mode of *régulation*

INSTITUTIONAL FORM	ANALYTICAL QUESTIONS
WAGE-LABOUR NEXUS: *Characterises social relationship between labour and capital which is found in: the means of production; the organisation of work; the length and intensity of the working day; the ways in which workers are recruited and retained; skill structure and acquisition; the factors which determine direct and indirect wage income; and, the standard of living or 'way of life' of wage-earners.*	• What is the pattern of household debt to disposable income? • What use is made by households of credit for consumption? • What is the private provision for social wage elements e.g. retirement income, education, health? • What is the extent of non-bank lending to households?
MONETARY REGIME: *Prevailing monetary standard subject to arrangements controlled and exercised by the state (e.g. monetary policy, banking sector regulation, lender-of-last resort policies, controls on transfer of money between countries); its very nature and functioning determine the distribution of money between industrial capital and finance capital.*	• What is the use of debt, commodity and other derivatives, securitisation and other financial instruments? • What type and sources of finance (e.g. commercial paper) are used by financial and non-financial firms? • Is there evidence of changing debt-to-equity ratios? • What is the turnover of financial markets, and are any particularly dominant? • What is the extent of investment banking? • In what ways has prudential regulation changed and what are the implications?
FORM OF COMPETITION: *How units of accumulation relate; distinguishable by many market structure aspects (e.g. company and/or production unit size, number and type of market participants, nature of relationships between companies in different stages of production process, the role of the market and state, goods exchanged in markets and price determination).*	• What is the pattern of investment in productive capacity by financial and non-financial firms? • What is the evidence of retained earnings being used to fund productive investment? • What are the shares of total stock and profits from intangible assets? • What financial services and investments are used by non-financial firms? • What is the pattern of dividend payout to after-tax income ratio?

INSTITUTIONAL FORM	ANALYTICAL QUESTIONS
	• What divestment strategies are utilised by non-financial firms? • What is the pattern of public listings? • What is the extent of share buybacks and equity repayments? • What is the extent (and forms) of financial trading undertaken by non-financial firms? • What is the relationship to banks of non-financial firms?
INTERNATIONAL POSITION: *Depicted by trade agreements, the international monetary system, participation in international institutions (e.g. OECD, World Bank, IMF, WTO), financial and trade networks, and transnational firm.*	• What use has been made of global financial markets for borrowing and lending? • What is the extent of foreign direct investment by financial and non-financial firms?
ROLE OF THE STATE: *Secures the other institutional forms and their overall complementarity; eeconomic policy is a key mechanism which the state uses to act on, and work within, the mode of régulation.*	• What share of national income share is derived from the financial sector? • What privatisations have occurred and what has been subsequent investment in these former public assets? • In what ways has foreign investment, trade and other economic policies facilitated the processes of financialisation?

Completion of this macro analysis, which specifically includes the processes of financialisation, as a precursor will enable a sector analysis to be undertaken which explicitly reveals the effects and consequences of finance and financialisation on production within that sector and more broadly the process of accumulation. The sector analysis, mirroring the macro analysis, can pose analytical questions as outlined in Table 2 in the context of a wider analysis of a sector's characteristics and features to delineate the nature and extent of the sector's financialisation and the implications.

A *Régulationist* sector analysis can yield a detailed understanding of a sector's structure, functioning and position within the accumulation regime of a capitalist economy. Moreover, the analytical framework of a *Régulationist* sector analysis can be extended if the objective is to understand the impact of finance and financialisation on production within an industrial sector. Nevertheless, a core feature of this analytical framework contains a critical limitation to its application. A sectoral mode of *régulation* can only be understood in terms of the macro mode, and the sectoral impact of financialisation on production is only explicable through the 'lens' of the macro economy's financialisation. Thus the boundaries of the macro economy implicitly limit a sectoral analysis to only those sectors which do not transcend the geographic borders of a national economy otherwise a sector's structure, dynamics and production cannot be explained. However, the globalisation of production over the last three decades means that many commodities are produced within sectors which transcend the physical borders of a national economy.

4.2 Systems of provision approach

Originally developed by Fine and Leopold (1993) and subsequently extended by Fine (2002), the systems of provision (SOP) approach takes consumption as its object of study. Analysis of a SOP focuses on specifying the vertical chain of activities, including feedback relationships,

> connecting production to consumption (and even disposal) with the commodity as meeting point along the way. The commodity form itself structures provision in this way, even if horizontal factors, whether attached to production or consumption, also prevail alongside the imperatives of profitability (Fine 2013b: 220).

A SOP analysis takes into account not only general theories of demand and supply but also the disparate elements of power, taste and culture informed by other disciplines in the analysis of consumption. The combination and nature of these factors will inevitably be commodity specific and not readily bundled into general categories on the basis of individual elements. The SOP approach is

> consciously sensitive to the difference between commodities, not so much as items of consumption alone, but in terms of the economic and social processes and structures by which they become such. Even where these economic and social relations are shared, the way in which they interact may well be different across commodities. All tend to be the product of wage labour; but production processes are organised differently, are consumed and disposed of differently; they serve needs that are themselves socially constructed and satisfied (or not) very differently (Fine 2002: 82).

As well as describing physical supply chains, a SOP includes the relationships across chains either through their intersections at particular levels of the vertical supply system, or horizontally in the context of global and national political and economic structures.

This is how Newman (2009b: 87) used the SOP approach to identify the components of the international coffee system:

> We thus define the international coffee system as the vertical and horizontal structures, relations and processes that bring about the supply of coffee from production to consumption. More than the structure of the supply system, made up on any number of coffee chains, the coffee system also includes the relationships across chains either through their intersections at particular levels of the vertical supply system, or horizontally in the context of the global and national political and economic structures. The components of the coffee system thus include: the various market actors that are involved in the production, marketing and processing of physical coffee; the financial intermediaries operating on international commodity exchanges and the institutional and private investors that they serve; and the regulatory environment faced by different actors at different levels of the supply chains as well as the regulatory environment of the international exchanges.

This description aptly illuminates a number of critical aspects about a SOP and its analytical framework, namely:

- systems of provision are commodity-specific;
- each SOP is different and specific to the commodity concerned;
- each SOP is seen as distinct from, if interacting with, others and to vary significantly from one commodity to another;
- a SOP needs to be analysed through the material and cultural specificities that bring together production, distribution, access and the nature and influence of the conditions under which these occur; and
- through vertically integrated chains of activities, consumption of a commodity is inherently linked to production which is shaped by social, political, economic, geographic and historical factors.

These aspects portend a complex analysis for each SOP if all the material and cultural specificities of the entire chain of activities (production to distribution to access) are to be comprehensively identified as well as the nature and influence of the conditions under which these activities occur. However, Bayliss *et.al* (2013) concede that, in practice, the way a SOP will be identified depends on the research question e.g. what is the role of finance and financialisation in the delivery of commodities. The authors further suggest that specification of a SOP can "draw freely upon standard ways of conceptualising and theorising across the social sciences by appeal to the following overlapping categories" *(ibid*: 13). These 'standard ways' are structures, processes, agents/agencies and relations which we can see in the above description by Newman of the international coffee system.

Consumption is located in the context of a chain of processes and structures brought about by relations between agents. Structures are defined as institutional forms of provisioning including - but not limited to - ownership patterns, control and delivery as well as price and quality access structures. Processes include phenomena such as globalisation, privatisation, decentralisation and, we would add, financialisation. Agents/agencies are the participants in all the activities along the chain from production to consumption which goes beyond the direct categories of those who produce and those who to consume to include regulators, trade unions, those who influence the delivery of finance, and more. Agencies interact with structures and processes. Finally, relations within a SOP are "differentiated by the roles of capital (or state as employer) and labour in production and other commercial (or non-commercial) operations through to the relational norms by social characteristics that are attached to levels and meanings of consumption" (*ibid).*

These constructs facilitate a SOP being framed either as an empirical provisioning chain from production to consumption or as a "chain of determinants across structures, processes, agencies and relations" (*ibid:* 14). Figure 2 illustrates how a SOP may be envisaged.

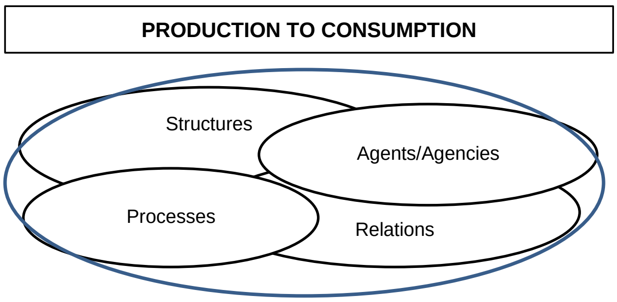

Figure 2: Systems of provision approach

Application of the SOP approach in practice is heavily inductive and, as Fine (2013: 222) acknowledges, it is not necessarily straightforward determining where one SOP ends and another begins.

The SOP approach has been applied to commodities such as sugar, meat and dairy, and more recently to the delivery of essential services (housing and water) in which the state often plays a significant role. The latter study of essential services was through the lens of finance and financialisation (Bayliss *et. al* 2013). We note that the SOP analysis of water strongly equated financialisation with the process of privatisation and a flow of private investment funds although subsequent discussion of the proliferation of complex financial instruments aimed at facilitating investment in water - through water-focused investment funds, water-structured financial products, water-indices and water-focused exchange traded funds - suggests a much more nuanced understanding of the processes and forms of financialisation.[3]

We would suggest that the SOP approach can be utilised to explain the impacts and consequences of financialisation on the structure of productive organisation through the application of, for example, the analytical questions listed in Table 3.

Table 3: Analytical questions to elucidate the financialisation of a SOP

SOP CONSTRUCTS	ANALYTICAL QUESTIONS

STRUCTURES	• Which institutional forms mediate processes of financialisation and how?
	  ○ Do particular institutional forms dominate processes of financialisation along the chain of activities from production to consumption?
	  ○ Are certain institutional forms (and structures of production) more integrated with/supportive of financialisation processes than others?
	• What role(s) does the state play in the structures facilitating financialisation?
	• In what ways does financialisation impact on price formation of the commodity along the SOP?

PROCESSES	• What processes and forms of financialisation are evident?
	  ○ Are there critical differences in processes and forms along the activities of the production to consumption chain?
	  ○ What role(s) does the state play in these processes and forms?
	• How do processes of financialisation affect structural change in the relations of production?
	• What is the interaction between financialisation and other evident processes

[3] We also note that one of authors is of the view that "privatization and commericialization of what was previously provided by the state … is not in and of itself financialization" (Fine 2013a: 55).

SOP CONSTRUCTS	ANALYTICAL QUESTIONS
	such as privatisation and commodification? o To what extent, and in which ways, are these processes interdependent?
AGENTS/ AGENCIES	• Which agents are directly engaged with processes of financialisation? o Are there any dominant forms of engagement for those agents who produce and those who consume? o What are the different forms of engagement for non-producing and non-consuming agents? • In what ways do different agents experience financialisation? • Who are the key agents driving and/or profiting from the processes of financialisation in a given SOP? o How do each of these agents promote the processes of financialisation? • How do processes of financialisation affect the ways in which agents exercise their agency?
RELATIONS	• What is the role of the state? • How do relations between agents in a SOP interact with the processes of financialisation? o How do relations mediate the processes of financialisation? o Do, and in what ways, do the processes of financialisation reshape relations? • How do processes of financialisation affect the relations between SOPs and the way that they evolve?

On the surface, the vertical nature of the SOP and its description of the processes involved from production to consumption of a commodity bear a striking resemblance to other commodity chain constructs discussed below. The SOP approach, however, differs in two crucial aspects. First, in terms of method, this approach proceeds with the understanding that the structure and dynamic of individual SOPs comes from the structuring of accumulation in production and through to consumption in practice. In this way, a SOP analysis seeks to understand the specificities of individual SOPs owing to how specific sectors have evolved in relation to one another historically and integrally with the socially and historically contingent form taken by the accumulation of capital rather than to construct typologies for the structure and dynamics of SOPs (Fine 2013b). Second, the SOP approach is underpinned by Marxist value theory and its theory of production.

4.3 Commodity chain constructs

Whilst often used as interchangeable nomenclature for the globally dispersed, vertically disintegrated production systems, global commodity chains (GCC), global value chains (GVC), and global production networks (GPN) constitute distinct approaches to the study of the organisation of production across national boundaries that differ in terms of analytical emphasis and underlying theoretical concepts. They do, however, share a common root in the 'commodity chain' concept coined by Hopkins and Wallerstein to mean "a network of labour and production processes whose end result is a finished commodity" (Hopkins & Wallerstein 1986: 159).

Within the World Systems conceptualisation of the world economy/accumulation on a global scale, a commodity chain is understood as an intermediate unit of analysis, where the totality of all commodity chains makes up the world system. The commodity chain analysis, in its original usage, thus constitutes a heuristic for gaining analytical purchase on these structural connections, the study of which illuminates the evolution of the global division and integration of labour into the world system over time (Bair 2008: 437). In this way commodity chains fit within a macro sociological analytical approach concerned with analysis of historical and contemporary dynamics within, and forms of, capitalism as a systemic whole.

The addition of 'global' to the 'commodity chain' took place with the 1994 publication of *Commodity Chains and Global Capitalism* edited by Gereffi and Korzeniewicz. This book launches the 'global commodity chain' as an object of analysis in and of itself. In contrast to the commodity chain as a heuristic device deployed in the analysis of the evolution of the world capitalism economy of world-systems research, these GCC (and later GVC) researchers begin with a descriptive definition of contemporary capitalism:

> Economic globalization has been accompanied by flexible specialization, or the appearance of new, technologically dynamic forms of organization … Capitalism today thus entails the detailed disaggregation of stages of production and consumption across national boundaries, under the organizational structure of densely networked firms and enterprises (Gereffi & Koreniewicz 1994: 1).

In this way, the approach assumes the direction of causality as running from micro (firm and chain level) to the macro and is thus concerned with the organisational forms of contemporary global industries and the internal dynamics of chains themselves from a firm-centric perspective (Bair 2008).

According to Gereffi (1994), a GCC has three key dimensions: [a] a physical input-output structure; [b] a territoriality; and [c] a governance structure which describes the overall coordination and relative coherence of a chain. These dimensions suggest investigation of a GCC entails the identification of the full set of actors involved in the production and distribution of a particular good or service and mapping out the relationships that exist among them with the aim of finding out where and how value addition takes place, the division of labour and the distribution of rewards along the chain. GCC research has, in practice, focused almost exclusively on chain governance as a central concept. Closely related to governance is the notion of 'driveness' which describes the extent to which certain firms in certain positions in the chain – so-called lead firms – are able to steer its functioning to their own benefit.

Development of the GCC analytical framework has taken the form of constructing ever more complex categories and typologies describing chain governance and driveness to fit with a growing number of diverse case studies. Along with governance, the concept of upgrading has featured prominently in analyses. In effect, upgrading describes the process by which actors/firms operating at lower value added segments can move towards higher value added activities within a given chain or diversify into higher value added activities across chains. The increasing competitiveness associated with the post-Fordist context of global production and competition has meant firms face an imperative to upgrade as a condition of survival. In the context of developing countries, GCC analysis has been influential in guiding research framed in terms of understanding the governance structures of individual supply chains and in identifying opportunities and challenges for developing country firms to upgrade.

The firm constitutes the main analytical building block in the GCC analytical framework. Governance structures are characterised by the relative size and influence of firms within a chain, with lead firms occupying a uniquely powerful position in terms of their ability to shape outcomes along a chain and the distribution of value added. Upgrading takes place at the level of the firm. In this way, labour and other social categories have been almost entirely absented from analyses both as actors within the chain and the extent to which workers play a role in chain reorganisation.

GVC analysis was launched in 2001 with the publication of the Institute of Development Studies bulletin 'Introduction: Globalisation, value chains and development' authored by Gereffi, Humphrey, Kaplinsky and Sturgeon. More than a decisive change in nomenclature to aid communication between researchers across multiple disciplines, where "a proliferation of overlapping names and concepts" (Gereffi *et. al* 2001: 2) had arisen, GVC analysis constitutes both a stream within chain studies more broadly as well as a departure in terms of theoretical orientation from a macro-sociological to a micro-oriented approach that "focuses on the coordination of inter-firm dyads in a global value chain" (Bair 2008: 339). Moreover, there was a shift in orienting concepts and intellectual influences further away from structuralist development economics and dependency theory, that informed World Systems Theory, and the adoption of orienting concepts including value-addition, transaction costs and industrial upgrading, common in the international business and industrial organisation literature (Bair 2005).

The transition from GCC to GVC involved a convergence between the conclusions on upgrading and development in GVC analysis of the 1990s and early 2000s (and GCC analysis before that) and those drawn from the contemporaneous literature on industrial clusters. The launch of GVC analysis resulted from the coming together of key authors in the respective fields of GVC and industrial cluster analyses, predominantly at the Sussex-based Institute of Development Studies. This saw the convergence in theoretical content between GVC and industrial cluster analyses, heavily influenced by transaction cost economics, in the theoretical development of the former.

The central analytical concept of governance, defined as the authority and power relationships that affect how resources flow along the length of the chain by Gereffi (1994) has been replaced by a narrower conception of governance as the ability of certain firms in the chain to coordinate activities and shape inter-firm relationships along the chain with transaction costs as the central determining factor affecting the organisational and spatial configuration of a chain (Gereffi, Humphrey & Sturgeon 2005; Bair 2008).

In addition, the shift from commodity chains as a heuristic device to an object of analysis has led to analyses being almost exclusively preoccupied by the vertical nature of the chain and, in so doing, have focused on endogenous explanations for changes in the structure of chains, to the neglect of inter-chain interactions and the relationships between chains and the wider social, historical, political and economic context. It follows that financialisation and its affects across chains has been neglected in GVC analysis.

There have been a number of responses by way of critique of developments in GVC analysis. Jennifer Bair called for, and has developed, a second generation of GCC analysis that re-roots itself in the economic sociology of World Systems Theory (Bair 2005; Bair 2014). A prominent spin-off from GCC/GVC has been the global production networks (GPN) approach emanating from economic geography. Proponents of the GPN approach stress the importance of extra-firm networks, interactions, and mutual constitution and connectedness of local to the global, and social embeddedness. GPN analyses thus emphasise geographical variation in the mode of interaction between local actors and GPNs and the outcomes of these interactions (Bair 2008; Henderson *et al.* 2002). GPN returns the chain construct to the role of a heuristic framework, this time, "for understanding the interconnectedness and uneven development of the global economy" (Coe 2012: 389). Financialisation has also been placed on the research agenda of GPN analysis, but is yet to be developed within the framework (Coe 2012).

By emphasising the articulation and mutual constitution of global and local processes, the GPN approach takes us closer to our desired analytical approach, it is, however, inherently not able to take us far enough. While GPN constitutes a sophisticated meso-level framework that helps us to reveal interconnections within the global economy, the global economy as a macro-coherent system is under-theorised. In this way, it cannot offer us a systemic political economy of capitalism and gaps and omissions will tend to arise as observed by Coe (2012). By contrast, both *Régulation* theory and the systems of provision approach are informed by an approach to the study of capitalism as a system of accumulation.

Despite the aforementioned analytical limitations of these chain constructs for the research task, the impacts of financialisation at the firm level – within a global chain - could be better understood through the application of some analytical questions as illustrated in Table 4.

TABLE 4: Analytical questions to reveal financialisation within a commodity chain

ANALYTICAL QUESTIONS
• Where, and how, do global production networks intersect with financial networks? o Who are the financial players and what is the nature of their relationship with chain actors? • What is the nature/form of firm financing at different nodes of the chain and how does this influence/or how is this influenced by the coordination of chain activities. o What is the extent to which retained earnings have been used by a non-financial firm for productive expansion?

ANALYTICAL QUESTIONS
• What types of financial activities do firms engage in at different nodes of a single chain, and across different chains? How do these relate to a firm's other areas of business? o What imperatives and opportunities do different firms in different industries face to engage in financialised accumulation? o What is the extent of activity of a non-financial firm in financial markets through, for example, use of commercial paper and trading in commodity or other derivatives? o What is the level of financial investment by a non-financial firm? o What are the financial activities of lead firms? • How does a firm's/actor's relationship with finance affect investment decisions, contractual arrangements, chain coordination and overall structure and functioning of the chain? o What is the impact of a firm's financial activities on upstream/downstream firms? o To what extent has a firm down-sized while distributing a larger share of profits to shareholders? o What use does each firm make of outsourcing? o What transfer of price risk to different chain actors has occurred? o What is the scope for hedging (for the management of price risk) and income streams from futures trading? o To what extent is risk management at the centre of a non-financial firm's core capabilities?

4.4 The *filière* approach

The Francophone-inspired *filière* approach is a variant of commodity chain analysis. A *filière* is viewed as a commodity or production chain.[4] The primary objective of this analytical approach has been to 'map' the flow of a commodity as it is physically transformed through various stages from raw material inputs – the site of production - to the final product and point of consumption. This approach is not strongly aligned with a particular theoretical tradition and consequently is more a 'research tool' which has received limited attention with its application heavily focused on agricultural commodities from the former French colonies (Raikes *et. al* 2000).[5]

In essence, the structure of a *filière* is seen as a schema of markets through which a commodity flows sequentially from those that supply the conditions of production (e.g. land, labour, inputs, finance and other services) through to production, marketing, processing, distribution and ultimately consumption markets. The description of this particular sequence is perhaps more applicable for agricultural commodities and not all

[4] Bernstein (1996) refers to *filière vivrières* which are specifically food commodity chains.

[5] Initially its use was directed at determining price formation along the commodity chain. Subsequently a greater analytical emphasis has been placed on the institutions influencing the commodity chain.

stages will necessarily be found for other commodities or in that sequence. Figure 3 demonstrates the sequence of markets which structure a *filière*.

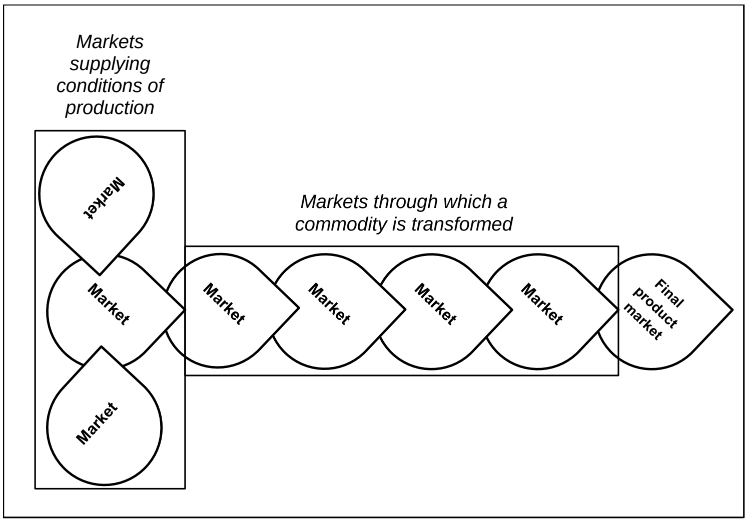

Figure 3: The market sequence of a *filière*

The institutions, agents and associations of each market (the latter termed by Bernstein (1996) as 'activities/functions') are analysed to explain each stage of the *filière* and its constituent parts. Institutions are seen as establishing markets and ensuring their ongoing functioning (e.g. legislation, state apparatus, policies), a two-fold classification of market agents is applied (capital/labour and producer/consumer) and associations refer to public organisations such as trade unions or employer bodies.

Bernstein (1996: 121) contends that the *filière* is best understood if its analysis is situated within an "analysis of the social relations and institutions that structure economic life and markets (i.e. a broader totality which has parallels with *Régulationist* sector analysis and the systems of provision approach) because:

> the advantages of the *filière* approach in cutting a particular 'slice' from larger economic organisms to examine under the analytical microscope, may have corresponding disadvantages if we lose sight of the entities from which the 'slice' is extracted, how and where it fits into, and is shaped by, other elements of those entities (*ibid* : 128).

Lagendik (1997: 6) also suggests that the *filière* approach not only embraces the "notion of a production chain … but also the embedding of production in a specific socio-political context", and a 'merged *filière'* perspective (i.e. an analysis of multiple related *filières)* is far more informative for policymakers.

Two further issues in using this approach are also raised by Bernstein (1996). Market agents may not be easily differentiated as producers or consumers of a commodity, and in fact the boundary may blur along the *filière*. The second issue is more fundamental. Strictly applied, the approach "identifies a clearly defined final product (by its *use value* in consumption), then works back along the chain of its production and realisation as a commodity (both use value and exchange value)" (*ibid:* 128, original emphasis). However, more than one final product may be evident which poses the question: Should each final product be analysed as a distinct *filière?*

We also suggest this issue signals another aspect about the use of this approach. A single commodity is portrayed as having progressed through some form of stand-alone linear process of discrete stages from production to consumption. Production may involve a number of transformations to reach the final product (e.g. cotton to yarn to fabric to shirts) which all need to be 'mapped' to ensure the most accurate representation of the *filière*. In addition, a *filière* may be closely related to other distinct *filières*. Apart from the potential difficulties of distinguishing the market schema of each, how accurate is the analysis of a *filière* if these close interrelationships are not taken into account?

The application of the *filière* approach has been virtually limited to agricultural commodities. In addition, analyses have been "confined to the parts of the 'product systems' located in specific producing countries, over a very short time period (Raikes *et. al* 2000: 405). However, the identification of a schema of markets is not limited geographically and thus could be usefully applied from the production to consumption of a commodity which transcends national borders.

Table 5 sets out a series of analytical questions to identify the schema of markets around which a *filière* is structured and to determine the role of financialisation in shaping the structure and functioning of those markets.

TABLE 5: Analytical questions to identify the market schema of markets and the role of financialisation

ANALYTICAL QUESTIONS	FINANCIALISATION INDICATORS
• What conditions of production are required? o Labour skills o Technology o Input goods (including raw materials) o Finance • How many stages of production (transformation) occur? o Are they co-located? o If not, do other markets intervene for each stage to occur? • How does distribution occur? • What are the points of final consumption?	• How are financial firms involved in each market? o Investors o Traders of derivatives and other financial instruments o Market intermediaries • What financial instruments are present in each market? o Commodity and other derivatives o Securitisation o Other forms • What is the role of banks in each market? • What is the role of international financial institutions in each market e.g. IMF, ADB, World Bank? • What financial arrangements are required at each stage of transformation and distribution, and for final consumption to occur? o Relationships to banks o Credit system o Foreign exchange market

4.5 Analyses of markets

Commodities are produced in industrial sectors and bought and sold in markets. Analyses of markets provide another lens through which we may consider the impact of financialisation and if there are co-constitutive links with the organisation of production.

The discourse about markets has been overwhelmingly skewed towards the theoretical, "concerned more with analysing how people conceive of market systems than ... with analysing the operation of those systems or the activities of market actors" (Carrier 1997: xiii). Empirical markets have attracted few analytical studies to determine the specific pragmatic manifestation or representation of their structure, operation, participants, behaviours, rules, and/or price determination.[6]

[6] Notable exceptions have been French strawberry and fish markets, financial and emission trading markets, Australian markets for essential goods and services, and the UK's markets for food, housing, water, telecommunications, public transport, financial services and energy (for example, see: Chester 2010, 2013; Garcia-Parpet 2007; Kirman and Vignes 1992; MacKenzie 2009; Public Sector Research International Unit 2008).

Similarly, 'operationalising' the theoretical and conceptual into an analytical framework to conduct empirical analyses of actually-existing markets has received limited attention. One exception is Chester (2013). Drawing on contributions from Boyer (1997), Harvey and Randles (2002), Prasch (1995, 2008), and Tjordman (1998, 2004), she identifies a set of propositions about different types of market in space and time, the role of property rights and contract law, the dimensions shaping the organisation of exchange, and the embedded behaviours created by rules reflecting political decision.

A distillation of these propositions reveals twelve distinctive properties of markets. Ranging from the relatively simple to the more complex, and not necessarily mutually exclusive, these properties are: [1] A market is a location where buyers and sellers interact; [2] A market may be a physical location but does not need to be as evidenced by eBay, an internet auction, and online payment for goods and services; [3] Goods may be bought and sold on local, regional, national or global markets; [4] A market requires a monetary system to facilitate transactions and convey prices; [5] Markets may be for intermediate or final goods; [6] The fundamental event in a market is exchange - of some object, promise, service or privilege; [7] A market is a locus of repeated exchanges; [8] A legal system of property rights determines what may be exchanged in a market; [9] Implicit or explicit contracts govern the conditions under which property is exchanged; [10] Rules about transactions organise how buyers and sellers interact, and who may be a buyer and a seller; [11] Rules about the provision of information (including about the quality of the good) enable sellers to propose a price and enable buyers to accept or negotiate another; and [12] Organised behaviour, induced by transaction and information rules, provides continuity to a market's operation.

These properties signal a set of questions to transcend abstract notions about the market to their actualisation if the object is to conduct empirical analyses of actually-existing markets. These questions can be categorised according to: the process of exchange, the commodity traded in the market, market location, market participants, eligibility to market access, market behaviour, price determination, the form of competition, market information, market linkages and interdependencies, institutional supports, and the role of the state

(Table 6).[7] To understand the impact of financialisation on the structure, functioning and outcomes of markets these questions can be extended within each category.

Table 6 includes - in bold - examples of such questions which are similar to or build upon those posed in Table 5 to understand the financialisation of markets within a *filière*.

TABLE 6: Analytical questions for market analyses including their financialisation

CATEGORY	ANALYTICAL QUESTIONS
EXCHANGE	• Does the market coordinate production, distribution or consumption decisions and outcomes?
COMMODITY	• What is the commodity bought and sold? • How are these goods or services defined? **Are good and services defined in financial terms?** • To what extent has the definition changed or is evolving?
MARKET LOCATION	• How, and where, are market transactions performed? • Must participants meet any obligations or criteria to perform market transactions? **Are any obligations or criteria to perform market transactions framed in financial terms?** • Is there a physical or virtual market location and how is this organised? • Is the sphere of interaction local or global? • **Is the market location influenced by a credit system, a relationship to banks or a foreign exchange market?**
ELIGIBILITY TO MARKET ACCESS	• What are the 'rules' or protocols which determine eligibility or ineligibility for ongoing access to a market? • Are there legal and political decisions, or compromises, which determine who participates? • What must a participant do to meet eligibility criteria and maintain ongoing market access? • **Do any financial institutions or the access to financial instruments influence eligibility to market access?**
MARKET PARTICIPANTS	• Who are the market participants (individuals, households, firms, groups, organisations, the state)? • **How are financial firms involved in the market (e.g. investors, traders of derivatives and other financial instruments, market intermediaries)?** • **Are international financial institutions involved in the market?** • Who transacts with whom? • Are intermediaries involved and if so, who are they?

[7] These questions are far more penetrating than the schema suggested by Aspers (2011: 173) for a sociological analysis of markets founded on the three 'prerequisites' of: the nature of a market, its institutional foundations and price setting. Although there are some points of commonality, such as price determination, Aspers' schema is very general and will not yield the same depth of findings about the institutional underpinnings, behavioural influences, market operation, availability and accessibility of information, forms of interaction between participants, or market interdependencies.

CATEGORY	ANALYTICAL QUESTIONS
MARKET BEHAVIOUR	• What forms of interaction take place between buyers and sellers, and other market participants? • **Are financial instruments required for market participants to interact?** • Are particular behaviours forbidden? • Are there implicit rules influencing the behaviour of market participants? • Are penalties imposed for breaches of market behaviour and who enforces? • **What is the lag between payments made to suppliers and monies received at point of purchase?**
FORM OF COMPETITION	• What is the market's form of competition? • How many traders are there in the market? **Are financial firms trading in the market?** • What is the ownership structure in the market? **Is there evidence of ownership by financial firms?** • Is there evidence of market concentration? • Is there evidence of market power?
PRICE DETERMINATION	• How is price determined? • Are prices set outside or within the market? • If it is a price-setting market, does this lead to different bilateral prices? • **What is the extent of price volatility?** • **What use is made of hedging for the management of price risk?** • **How do derivatives impact on price formation?**
INFORMATION	• What information is available to whom? **Is market information presented in financial terms? Does the information presume some degree of financial literacy?** • Where is it available? • What technology and skills are needed to access or process market information? • What is the impact on market participation if information access is precluded in some way?
MARKET LINKAGES & INTERDEPENDENCIES	• What are the interrelationships with other markets? **Do market interrelationships include financial markets?** • Are these relationships co-constitutive? • How are these relationships organised? **Do financial institutions influence these relationships? What is the relationship of the market to banks?** • What are the implications of these linkages in terms of market operation, market participation and market outcomes?
INSTITUTIONAL SUPPORTS	• What are the institutions, organisations, legislation or associations that organise the functioning of the market? • What are their responsibilities? • How do they enforce market operations? • To what or who are they accountable? • **Does the market require a credit system to function?**

CATEGORY	ANALYTICAL QUESTIONS
THE STATE	• What is the role of the state in terms of, but not limited to, the market's organisation and operation, and determining the eligibility of participants? • **What role does the state play in the credit system and foreign exchange market?**

4.6 A financialisation analytical grid

Table 7 summarises the respective insights – and limitations - of the five analytical approaches interrogated to determine their respective capabilities to assist in expanding our empirical understanding of how production has been restructured in the era of financialisation, and the implications for the process of capital accumulation. Each of these approaches can be configured, through the inclusion of a set of critical analytical questions, to reveal the nature and extent of the financialisation of a sector, commodity, firm or market.

Régulation theory can provide an analysis of a 'financialised' industrial sector located with the regime of capitalist accumulation although the analysis can only be applied to sectors which fall within the geographic boundaries of a macro economy. The highly inductive SOP approach can analyse the financialisation of the production and consumption of a commodity within a sector which transcends the boundaries of a macro economy.

Commodity chain constructs can illuminate the financialisation of firms within a commodity chain also transcending the geographic borders of a macro economy although these analyses are not situated within the broader political economy context of the system of capitalist accumulation. The *filière* approach takes us to another micro level and allows an identification of the markets through which a commodity progresses to reach its final product form. Finally, market analyses can add another dimension to our understanding of financialisation in the contemporary era although that dimension is limited to the structure and functioning of markets and the relationship to the restructuring of production is far more difficult to determine.

Singularly, the application of each approach has the potential to expand our empirical understanding of the impacts of financialisation upon production although the extent to which each contribution can be used to theorise about contemporary accumulation varies considerably and that is the end-goal upon which we are focused. *Régulation* theory and the

TABLE 7: Insights and issues in the application of the five selected analytical approaches

ANALYTICAL APPROACH	OBJECT OF ANALYSIS	ANALYTICAL FOCUS	UNIT OF ANALYSIS	INSIGHTS AND ISSUES
Régulation theory	Sector (and macro)	Conjunction of institutional forms	Institutions	• Locates an industrial sector within the broader (macro) political economy. • Requires extensive analysis at macro and sector levels. • Analysis through institutional forms. • Sectoral impact of financialisation reflects the financialised mode of *régulation*. • A sector can only be understood in terms of the macro mode which limits analytical application to sectors within the geographic limits of a macro economy.
Systems of provision approach	System linking production of a commodity with its consumption	Structures, Processes, Agents/ Agencies, Relations	Commodity	• Locates a commodity within the broader political economy. • Vertical analysis of entire chain of activities from production to consumption. • Highly inductive approach. • Difficulties in determining where a SOP starts and ends. • Application suitable to commodities produced within sectors which transcend borders of a macro economy.
Commodity chain constructs (GCC/GVC)	Commodity supply chain	Intra-chain / Governance/ Upgrading/	Firm	• Focus is the vertical nature of the chain and intra-chain dynamics particularly through transactions. • Analysis is through firms occupying the chain. • Neglects inter-chain interactions and the wider political economy context.
Filière	Stages of a commodity to final product	Institutions/ Agents/ Associations	Market	• Analysis is through the markets in which a commodity is progressively transformed to final product stage. • Schema of markets is not limited geographically. • A *filière* may be closely related to other *filières* which need mapping to ensure most accurate representation.
Market analyses	Market	Structure, operation and outcomes of markets	Market	• Requires analysis of exchange, commodity, location, access eligibility, participants, behaviour, competition, price formation, information, linkages and interdependencies, institutional supports and role of the state. • Relationship to changes in productive organisation more difficult to determine.

of provision approach both situate an empirical analysis within the broader political economy being underpinned by a view of the capitalist economy organised around the distribution of capital through the production, circulation and distribution of surplus value. The empirical findings from the use of commodity chain constructs of GCC and GVC, the *filière* approach and market analyses are in essence like 'extracts' divorced from their social, economic and political context within capitalism.

Nevertheless, we are of the view that a composite of these five analytical approaches can form a multi-dimensional prism through which we can garner robust empirical evidence – at multiple analytical levels – which will make a strong contribution towards a systemic understanding of contemporary capitalist accumulation and, in turn, contribute to the theorising of the dynamics and relations of accumulation based upon substantive empirical evidence.

Table 8 presents a composite of the analytical grid of questions which we have infused into each analytical approach to create a production 'lens' for the phenomenon of financialisation. These questions are indicative of those to be posed for a critical analysis and should be adjusted to reflect the changed forms and processes of financialisation which occur over time. In addition, some of the questions are framed very generally and need to be broken down into constituent parts to yield a detailed historical dynamic analysis.

Figure 4 demonstrates how these analytical approaches may be utilised as a multi-dimensional prism for empirical studies. For example, a *Régulation* analysis of an industrial sector which is bound by a macro economy can be extended by using the *filière* approach to determine the markets through which the commodity of that sector is transformed, detailed analyses of those markets can be undertaken and commodity chain analysis can be applied to the firms operating in that sector. This extended analysis will provide detailed insights into not only the financialisation of production within an industrial sector, but also the impact of financialisation on firms operating within that sector and the markets through which the sector's commodity is progressively transformed to a final product.

A SOP analysis of a commodity produced within a sector which is not bound by a macro economy can be extended in a similar manner with analyses of the markets through which a commodity progresses identified by the *filière* approach and commodity chain analysis providing insights from the level of firms involved in the commodity's production.

TABLE 8: Composite analytical grid to determine the processes, forms and extent of financialisation at different analytical levels

RÉGULATION **THEORY**	**SYSTEM OF PROVISION**	**COMMODITY CHAIN CONSTRUCTS**	**FILIÈRE APPROACH**	**MARKET ANALYSES**
WAGE-LABOUR NEXUS • What is the pattern of household debt to disposable income? • What use is made by households of credit for consumption? • What is the private provision for social wage elements e.g. retirement income, education, health? • What is the extent of non-bank lending to households? MONETARY REGIME • What is the use of debt, commodity and other derivatives, securitisation and other financial instruments? • What type and sources of finance (e.g. commercial paper) are used by financial and non-financial firms? • Is there evidence of changing debt-to-equity ratios? • What is the turnover of financial markets, and are any particularly dominant? • What is the extent of investment banking? • In what ways has prudential regulation changed and what	STRUCTURES • Which institutional forms mediate processes of financialisation and how? o Do particular institutional forms dominate processes of financialisation along the chain of activities from production to consumption? o Are certain institutional forms (and structures of production) more integrated with/supportive of financialisation processes than others? • What role(s) does the state play in the structures facilitating financialisation? • In what ways does financialisation impact on price formation of the commodity along the SOP? PROCESSES • What processes and forms of financialisation are evident? o Are there critical differences in processes and forms along the activities of the production to consumption chain?	• Where, and how, do global production networks intersect with financial networks? o Who are the financial players and what is the nature of their relationship with chain actors? • What is the nature/form of firm financing at different nodes of the chain and how does this influence/or how is this influenced by the coordination of chain activities. o What is the extent to which retained earnings have been used by a non-financial firm for productive expansion? • What types of financial activities do firms engage in at different nodes of a single chain, and across different chains? How do these relate to a firm's other areas of business? o What imperatives and opportunities do different firms in different industries face to engage in financialised accumulation? o What is the extent of activity of a non-financial firm in financial markets through, for example, use of commercial paper and trading in commodity or	• How are financial firms involved in each market? o Investors o Traders of derivatives and other financial instruments o Market intermediaries • What financial instruments are present in each market? o Commodity and other derivatives o Securitisation o Other forms • What is the role of banks in each market? • What is the role of international financial institutions in each market e.g. IMF, ADB, World Bank? • What financial arrangements are required at each stage of transformation and distribution, and for final consumption to occur? o Relationships to	• Are good and services defined in financial terms? • Are any obligations or criteria to perform market transactions framed in financial terms? • Is the market location influenced by a credit system, a relationship to banks or a foreign exchange market? • Do any financial institutions or the access to financial instruments influence eligibility to market access? • How are financial firms involved in the market (e.g. investors, traders of derivatives and other financial instruments, market intermediaries)? • Are international financial institutions involved in the market? • Are financial instruments required for market participants to interact? • What is the lag between

***RÉGULATION* THEORY**	**SYSTEM OF PROVISION**	**COMMODITY CHAIN CONSTRUCTS**	**FILIÈRE APPROACH**	**MARKET ANALYSES**
are the implications? COMPETITION • What is the pattern of investment in productive capacity by financial and non-financial firms? • What is the evidence of retained earnings being used to fund productive investment? • What are the shares of total stock and profits from intangible assets? • What financial services and investments are used by non-financial firms? • What is the pattern of dividend payout to after-tax income ratio? • What divestment strategies are utilised by non-financial firms? • What is the pattern of public listings? • What is the extent of share buybacks and equity repayments? • What is the extent (and forms) of financial trading undertaken by non-financial firms? • What is the relationship to banks of non-financial firms?	◦ What role(s) does the state play in these processes and forms? • How do processes of financialisation affect structural change in the relations of production? • What is the interaction between financialisation and other evident processes such as privatisation and commodification? • To what extent, and in which ways, are these processes interdependent? AGENTS/AGENCIES • Which agents are directly engaged with processes of financialisation? ◦ Are there any dominant forms of engagement for those agents who produce and those who consume? ◦ What are the different forms of engagement for non-producing and non-consuming agents? • In what ways do different agents experience financialisation? • Who are the key agents driving and/or profiting from the processes of financialisation in a given	other derivatives? ◦ What is the level of financial investment by a non-financial firm? ◦ What are the financial activities of lead firms? • How does a firm's/actor's relationship with finance affect investment decisions, contractual arrangements, chain coordination and overall structure and functioning of the chain? ◦ What is the impact of a firm's financial activities on upstream/downstream firms? ◦ To what extent has a firm down-sized while distributing a larger share of profits to shareholders? ◦ What use does each firm make of outsourcing? ◦ What transfer of price risk to different chain actors has occurred? ◦ What is the scope for hedging (for the management of price risk) and income streams from futures trading? ◦ To what extent is risk management at the centre of a non-financial firm's core capabilities?	banks ◦ Credit system ◦ Foreign exchange market	payments made to suppliers and monies received at point of purchase? • Are financial firms trading in the market? • Is there evidence of ownership by financial firms? • What is the extent of price volatility? • What use is made of hedging for the management of price risk? • How do derivatives impact on price formation? • Is market information presented in financial terms? Does the information presume some degree of financial literacy? • Do market interrelationships include financial markets? • Do financial institutions influence these relationships? What is the relationship of the market to banks? • Does the market

RÉGULATION THEORY	SYSTEM OF PROVISION	COMMODITY CHAIN CONSTRUCTS	FILIÈRE APPROACH	MARKET ANALYSES
INTERNATIONAL POSITION • What use has been made of global financial markets for borrowing and lending? • What is the extent of foreign direct investment by financial and non-financial firms? FORM OF THE STATE • What share of national income share is derived from the financial sector? • What privatisations have occurred and what has been subsequent investment in these former public assets? • In what ways has foreign investment, trade and other economic policies facilitated the processes of financialisation?	SOP? o How do each of these agents promote the processes of financialisation? • How do processes of financialisation affect the ways in which agents exercise their agency? RELATIONS • What is the role of the state? • How do relations between agents in a SOP interact with the processes of financialisation? o How do relations mediate the processes of financialisation? o Do, and in what ways, do the processes of financialisation reshape relations? • How do processes of financialisation affect the relations between SOPs and the way that they evolve?			require a credit system to function? • What role does the state play in the credit system and foreign exchange market?

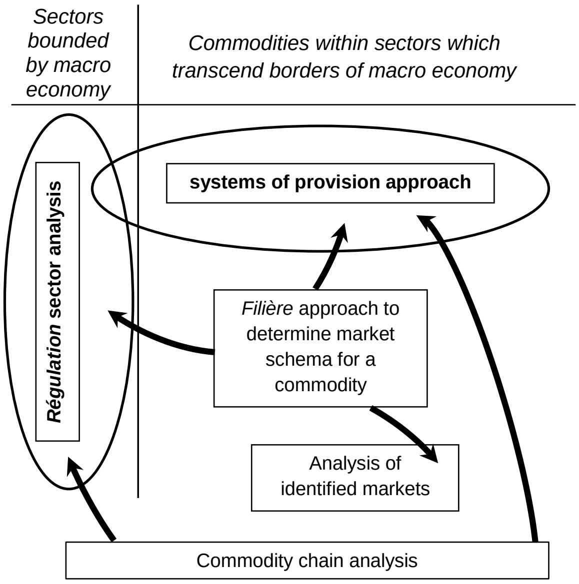

Figure 4: A multi-dimensional prism to analyse the impact of financialisation on production

5. CONCLUDING COMMENTS

One of the defining features of the contemporary era of neoliberal capitalism is the multi-dimensional phenomenon of financialisation with its differing scales of incidence and effects. A systemic understanding of the impact and consequences of financialisation upon the organisation of contemporary production and accumulation requires empirical analyses at the level of industrial sectors and specific commodities produced within those sectors. These empirical analyses are also needed to understand the role which the restructuring of production has played to sustain the phenomenon of financialisation.

We have proposed a multi-dimensional analytical approach to inform empirical research to facilitate a systemic understanding of the contemporary co-constitutive relationship of finance and production and, in turn, contribute to theorising of the dynamics and relations of accumulation based on substantive empirical evidence. Theorising about contemporary accumulation and financialisation can also inform the ongoing development and application of our analytical framework as depicted in Figure 5.

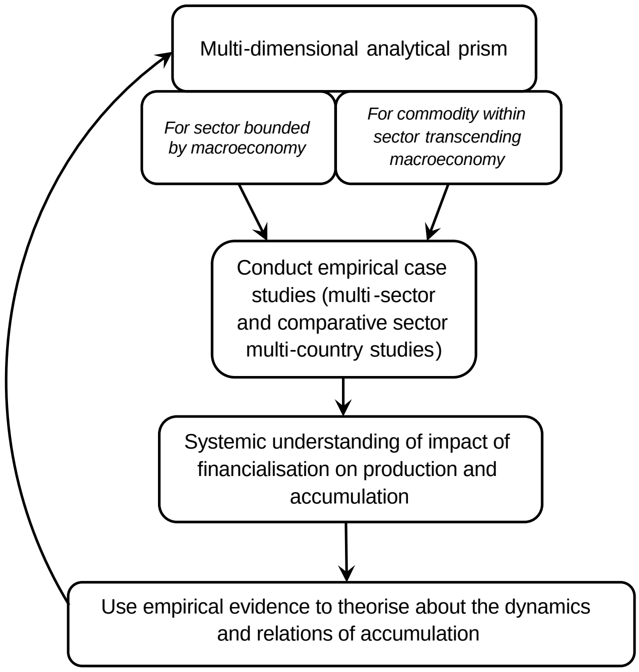

Figure 5: Using a multi-dimensional prism for empirical analysis to theorise about contemporary accumulation and refine the analytical framework

The posited framework uses as a foundation the two middle-range theories of *Régulation* theory and the systems of provision approach which are informed by an approach to the study of capitalism as a system of accumulation. The analytical framework extends this foundation by the application of three analytical tools which focus upon markets and firms. Each approach has been infused with a set of critical analytical questions framed to reveal the impact of financialisation upon the productive organisation within specific industrial sectors and, in turn, the commodities, firms and markets within those sectors.

To generate a robust and substantive evidence base will require multiple sector empirical analyses and comparative sector case studies for different economies. The current empirical research bias towards the US and UK needs to be redressed with comparative sector case studies for developed *and* developing economies. Financialisation may be more apparent in the developed economies of the US, the UK and across Europe. It has, however, also impacted less developed poorer economies which have experienced significant economic growth and the expansion of capitalist production during the era of financialisation. Multiple and comparative sector case studies for economies of different development stages will provide a much stronger evidentiary basis from which to draw propositions and generalisations about:

- how contemporary capitalist production is organised and mediated in the era of financialisation;
- the different modes of financialisation which have occurred and their prevalence within different forms of capitalist economies;
- the points of intersection between different modes of financialisation;
- the evolving 'hyrda-headed' forms of modes of financialisation evidenced in contemporary capitalist productive organisation;
- how financialised accumulation takes place;
- how the financialisation of accumulation takes place; and
- the sites where surplus value accrues from financialised accumulation.

These propositions and generalisations will generate the ultimate 'financialisation grid' to permit theorising about the dynamics and relations of contemporary capitalist accumulation in the era of financialisation.

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