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Cherchez la Firme: Redressing the Missing – *Meso* – Middle in Mainstream Economics

Stuart Holland and Andrew Black, Faculty of Economics of the University of Coimbra, Portugal; Faculty of Economics of Brunel University, UK.
sholland@fe.uc.pt; andrew.black@digitltd.com

Abstract

Aristotle warned against a 'missing middle' in logic (Gk *Mesos* – middle; intermediate). This paper submits that one of the reasons why there has been no major breakthrough in macroeconomics since the financial crisis of 2007-08 has been a missing middle in mainstream micro-macro syntheses, constrained by partial and general equilibrium premises. It maintains that transcending this needs recognition that large and dominant multinational corporations between small micro firms and macro outcomes – while also influencing both – merit the conceptual paradigm of mesoeconomics. Drawing on a range of uses of the concept, it relates this to reasons for 'too big to fail' and suggests implications for policies to gain accountability of big business, including how a meso dimension to input-output could yield transparency on risk-prone financial transactions by banks, and of corporations contributing to climate change. It also critiques misrepresentation of Walras and Pareto, as well as suggesting areas for research which could address, and potentially redress, 'missing middles' in mainstream micro-macro syntheses.

Key words: meso, global, governance, environment, accountability

JEL as yet has no classification for meso rather than micro and macroeconomics. The already wide range of literature cited in this paper suggests that it should.

1. Introduction

In an address in October 2016, when still heading the US Federal Reserve, Janet Yellen observed that the 1930s Depression motivated new ways of thinking about economic phenomena, and questioned why a Great Recovery in economic thought has proved elusive since the 2007-08 financial crisis (Yellen, 2016). In May 2018, Thomas Ferguson and Robert Johnson of the Institute for New Economic Thinking submitted to the G20's Global Solutions Summit in Berlin, that the hold of orthodoxy on the economics profession hurts not only research, but also people and societies subjected to discredited economic policies (Ferguson and Johnson, 2018). We agree in particular that,

> 'one of the central problems in this regard has been fixation on economic models emphasising full or nearly complete information and the presumption of tendencies for economies either to be always in equilibrium or heading there, not just in the present but into the indefinite future' (Ferguson and Johnson, 2018, p. 2).

We also recognise with Ferguson and Johnson (Ferguson and Johnson, 2018,, p. 7) that: 'Possible reforms of economics have stimulated widespread discussion, but produced a wide dispersion of views'. Yet suggest that there is already an increased interest by a range of institutional, evolutionary and environmental economists in meso as a 'missing middle' between micro and macroeconomics which, if gaining higher profile and a sustained research agenda, could synergise and reinforce more heterodox economic critiques.

While there also recently has been increasing openness to alternatives from mainstream institutions – such as the European Central Bank (ECB), the International Monetary Fund (IMF), the Organisation for Economic Co-operation and Development (OECD) and the National Bureau of Economic Research (NBER). As cited below, the ECB, while not overtly deploying the meso concept, has shifted from intending to scrutinise all of some 6,000 banks and credit institutions in the EU, to focus on only the 130 or so which are transnational – since it is they that dominate macro financial outcomes. Under the direction of Olivier Blanchard, the IMF Research Department has challenged deflationary theories of 'structural adjustment'. The OECD has done the same in questioning 'structural reforms', as has Benoit Cœuré, French executive director of the ECB. The NBER has published a series of papers highlighting the increased dominance of markets in the US by both banks and corporations, and linking this to rising inequality.

Yet, although significant, we suggest below that such institutional openness has not as yet redressed a 'missing middle' in mainstream economic thinking. Such as Samuelson following Ricardo by excluding capital mobility from his model of comparative advantage, which Heckscher and Ohlin had not. Thereby unconsciously ignoring that it was foreign direct investment, rather than comparative advantage, that drove post-war trade, but without the presumption that comparative advantage would maximise global welfare. As in aiding China to industrialise but, inversely, de-industrialising much of the US. Which helped Donald Trump gain the White House, and then repeal NAFTA whereas Hillary Clinton did not effectively address the issue.

In addition, misplaced pre-Keynesian macroeconomics such as rigidly rule-based *Ordoliberalismus* which, in the case of the 1992 deflationary Maastricht debt and deficit criteria, has condemned much of Europe to austerity in the single currency area of the Eurozone. Which also has challenged EU rhetoric claiming to be concerned with democratic values, such as denying anti-austerity majorities in a general election and referendum in Greece in 2015. While austerity policies also have provoked electoral support for populisms across Europe that, while deplorable where their rhetoric and intent may be racist, in key cases have grounds in disillusion with neoliberal policies that have damaged confidence in the post-war European project and, not without justification, have encouraged claims to return decision-making to national levels (Etzioni, 2018; Habermas, 2018).

2. Redressing Micro-Macro Syntheses

When Janet Yellen questioned in her address to the Boston Fed in 2016 why there had been a lack of rethinking in economic theory since the financial crisis, she cited a host of macroeconomic analyses yet did not even refer to 'too big to fail'. Whereas one of the reasons for seeking to redress the missing middle in mainstream economics relates to the increased concentration of banks in the US since the repeal of the Glass-Steagall Act in 1999 that not only aided the 2007-08 financial crisis, but has increased since it occurred (Grullon, Larkin and Michaely, 2017). Which also has been paralleled by ongoing concentration in global industry, with 100 corporations now representing half of world manufacturing output

(UNCTAD, 2016) while 100 of them source over 70%, and 25 over 50% of global carbon emissions (CDP, 2017).

Not that the meso concept, if still under-recognised, is new. It has been deployed and supported in a wide range of literature for decades. Featuring, for example, in both regional and international economics since the 1970s (Holland, 1974ff; Amoroso, 1996; 1998) as well as in conceptualising nations within a contiguous area as meso regions (Papadaskalopoulos, Karaganis and Christofakis, 2005). Such as Sub-Saharan Africa, persistently rent by both drought and poverty, the southern Mediterranean, penalised by austerity policies, or East Asia, still thriving. A mesoregion also may be between the size of a city or district and that of a nation, as in Brazil, where its use both is commonplace and part of national accounts (Roth and Brunnbauer, 2009). Rasmussen, Friis-Hanse and Funder (2018) have shown how meso-level institutions, between a central state and local levels, can facilitate responses to climate change.

While it by now may be commonplace that alleged market reforms in collapsing the Soviet Union led to both concentrated oligopoly, and oligarchy, Kleiner (2001; 2011) has extensively evidenced this in terms of meso dynamics. Zezza and Llambí (2002) have deployed meso in terms of policy reforms and rural poverty in Latin America. Kristjanson, Maren, Baltenweck, Ogutu and Notenbaert (2005) have shown how mapping poverty can be enhanced by a meso level analysis in Africa. Much of Hodgson's major long-term achievement in gaining support for institutional economics has been in showing that this spans the gap between micro and macroeconomics (Hodgson, 2000; 2007; 2013).

In parallel, in management theory, Hedström and Swedberg (1998) have evidenced how meso institutions can bring about both intended – and unintended – macro-level outcomes. Claude Ménard (2014) has suggested that a meso dimension can enhance understanding both of authoritarian hierarchies and countering them by hybrid forms of governance. In challenging command-and-control models of allegedly 'new' public management in health services Oliveira and others (Oliveira *et al*, 2016, 2017) have supported the case for relative autonomy at meso levels such as health authorities and hospitals, to gain both economic efficiency and social efficiency in terms of the wellbeing of health professionals and welfare of the public.

Liljenström and Svedin (2005) have extensively analysed meso-level relevance in the domains of physics, chemistry, ecology and social analysis, including economics, while recognising differences in how the natural and social sciences tend to deal with scaling issues. In parallel, in addressing problems from aggregation in economic, social and environmental studies, Radej (2011) has submitted that only a meso approach can address, and redress, their conceptual challenge.

In a paper with the well merited title of 'Hidden in Plain Sight', the main aim of Kim, Wennberg and Croidieu (2016) is to demonstrate gains from introducing meso-level institutions more explicitly into both economic and social theory and policies. While recognising that meso structures are now widely studied independently they also propose, with supporting evidence, that more can be gained from integrating them into multi-level micro-meso-macro analysis.

2.1 Micro-Meso-Macro

In deploying the meso concept in relation to economics and institutions we therefore are not alone. In economics, Ng has done so extensively (Ng, 1986; 1992; 1998; 1999; Ng and Wu, 2004), as have Dopfer, Foster and Potts (Dopfer, 2005; 2006; 2012; Foster, 2005; Dopfer, Foster and Potts, 2004; Dopfer and Potts, 2014). Yet some of their work has been concerned to reconcile it with partial and general equilibrium, whereas we are concerned to show that it profoundly qualifies them. Our approach is closer to that of Elsner (2010; 2013; 2015; 2016) and his work with a younger generation of economists (Elsner and Heinrich, 2009; Elsner, Heinrich and Schwardt, 2014; Elsner and Schwardt, 2015), including their readiness to relate the meso concept to precedents in the history of economic thought and to critique fictitious financial capital. As with Kim, Wennberg and Croidieu, we also share their view that institutional meso-micro level cooperation can enable pro-social outcomes.

Some of those recognising the meso concept have sought to do so in terms of 'rules' and 'axioms', of which we are sceptical, and for which Dopfer has been criticised on methodological grounds by others (e.g. Juniper, 2009). We also submit that some principles that have been assumed to be axiomatic in macroeconomic theory are profoundly qualified by the market power of major corporations. Such as the alleged interest rate sensitivity of investment, assumed in Hicks-Hansen IS-LM investment-savings and liquidity-money models, in that they fail to distinguish the different significance of borrowing costs for micro and meso firms, which can be high to penal for the former, yet insignificant for many of the latter when these can self-finance. More radically we maintain that foreign direct investment by multinational corporations not only qualifies the assumption that comparative advantage will maximise global welfare, but also the presumption of Keynes, and many Keynesians, that exchange rate changes necessarily can balance global trade outcomes.

The paper outlines several policy alternatives in terms of accounting and accountability of financial institutions, aiming to redress tax avoidance by multinational companies and tracing their carbon footprints. *Inter alia,* it does so on the basis of meso dimensions to input-output analysis, i.e. a focus on the few multinational firms that tend to represent the major share of output and trade at national and global levels. In the 1990s, proposals for this gained the interest of Delors and Leontief, and the then head of Eurostat, but were not followed through. Yet which now could inform how a Tobin tax introduced for such corporations could be effective without concerning all international transactions. As well as proposing several areas for further research within a meso conceptual framework that could yield more realism than mainstream micro-macro syntheses.

2.2 The – Meso – Representative Firm

What we centrally submit is that 'representative firm', at a global level, is not a price-taking, small enterprise subject to consumer sovereignty, but typically, a large multinational corporation with price-making power. Stiglitz (2016) has deemed this 'monopoly', which happens to be consistent with Marx's use of the term even if, with reason, Stiglitz qualifies it. In line with our own approach Ozawa (1999) has submitted that such firms are more typical of concentrated oligopoly – and that this can gain in explanatory power from a meso analytic approach.

As well known, and frequently referred to, in seeking to achieve more realism than the perfect competition assumptions of neoclassical micro theory, Chamberlin and Joan Robinson, in the same year (1933), proposed the concepts of monopolistic and imperfect competition. But in their respective analyses they both stayed within a partial equilibrium framework of limits to the market share of firms. With the outcome that they could be regarded as an add-on to mainstream micro theory. Which was assumed by Keynes of Robinson's imperfect competition concept, when he wrote in the Concluding Notes of *The General Theory* on the social philosophy to which it might lead that:

> 'if we have dealt otherwise with the problem of thrift, there is no objection to be raised against the modern classical theory as to the degree of consilience between private and public advantage in conditions of perfect and imperfect competition respectively'(Keynes, 1936, chapter 24, Part III).

Yet, as recognised by Kalecki (1943; 1954), big business can gain a decisive influence on macroeconomic outcomes and macro financial policy. Sraffa's recognition of increasing returns was published by Keynes in *The Economic Journal* in 1926, but then by and large, disregarded. That oligopoly, through scale economies, could dominate markets was recognised by Bain (1954), by Galbraith (1967), by Averitt (1968), by Sylos-Labini (1969) and, notably, by Eichner (1976). But their arguments, although justified, did not dislodge mainstream micro-macro assumptions. While even Eichner, who impressively demonstrated how corporations with market power could qualify macro outcomes, subtitled his 1976 *Megacorp* as *The Micro Foundations of Macro Dynamics.*

An exception to mainstream micro-macro analysis was François Perroux (1955; 1961; 1964; 1965) who was powerfully influential in post-war economic theory and policy in France, Belgium and Italy as well as in Latin America (Holland, 1987c). He already related big business domination of markets to its role in globalisation while his analysis of 'domination' was within a dynamic *champ des forces* rather than equilibrium outcomes. His concept of leading firms or *firmes motrices* in interregional and international polarisation was similar to Myrdal's (1957) concept of asymmetric circular and cumulative causation but with more emphasis on the role of dominant firms in driving it. While influencing also the decision of French planners in the 1960s to focus on policies to gain accountability of, and macro leverage from, leading firms (Holland, 1974b).

Another exception was Stephen Hymer (1968; 1972). Extending Marx's case that capital would draw on reserve armies of labour wherever it could when these were at or near subsistence levels, Hymer realised the relevance of this to foreign direct investment by multinational capital and that it had major implications for uneven rather than balanced global development. He had outlined this in his 1960s PhD which, though only published later, strongly influenced Kindleberger (1976; 1984) as well as Dunning and others (Dunning, 1978; 1988; 1998; Dunning and Rugman, 1985). But Hymer's breakthrough was otherwise neglected in mainstream economic literature while, tragically, he died prematurely in a road accident in 1974 when only 30, and did not live to follow through on his initial insights.

2.3 Meso Dominance and Macro Dynamics

Black and Dixon have submitted that, as a class, rather than individual firms within it, the global dominance of multinational companies has been persistent, and evidenced this (Black, 2016; Black and Dixon, 2016). Grullon, Larkin and Michaely (2017) have found that more than 75% of US industries had experienced an increase in product market concentration levels since the financial crisis. Firms with the largest increases in product market concentration had enjoyed higher profit margins, higher stock returns and more profitable mergers and acquisition deals, while enforcement of antitrust laws by the Department of Justice and the Federal Trade Commission waned during the administrations of both George W. Bush and Barack Obama.

Research by the OECD (2017) has found that a 100 'frontier' firms across the world have been able to increase their productivity, whereas this for the rest (the 'laggards') has been low or falling. 'Frontier' firms thereby are increasing their earnings and can increase pay substantially, whereas 'laggard' firms can find it difficult to do so. In a study for the NBER

Gutiérrez and Philippon (2017) have found that leading firms have been increasing concentration and decreasing competition in many industries since 2000, and that the gap is primarily driven by industry leaders who show higher profit margins but lower investment and lower capital formation.

In another NBER study Autor, Dorn, Katz, Patterson and Van Reenen (2017) have found that 'superstar' firms account for an increasing share of industry output. Yet also agree with Jones and Philippon (2016) who submit that the US capital stock was 5% to 10% lower than it could have been by 2012 if competition had remained at its level of 2000.

2.4 Meso Accelerators – and Decelerators

We suggest that this has implications for both recovering and qualifying what used to be a mainstream concept in macro theory – the accelerator – and recognising that under-investment by meso corporations in an economy may outcome in a macro 'decelerator', and employment and other multipliers, at a national level.

With some exceptions (e.g. Arestis and Gonzalez-Martinez, 2016), combined accelerator-multiplier models have fallen out of fashion. But were encouraged by Keynes' *General Theory* and, in some cases with capital stock adjustment principles, gained attention through to the 1950s from leading economists at the time, such as Tinbergen (1938), Samuelson (1939), Harrod (1939, 1948) and Hicks (1951), as well as Goodwin (1951), Chenery (1952) and Eckhaus (1953).

Some of their models were linear. Others such as Harrod's were not, as in his drawing on Keynes' – psychological – concept of the marginal efficiency of capital and conceptualising accelerators in terms of 'warranted growth', i.e. that rate of investment that entrepreneurs would deem to be justified in term of their judgement – right or wrong – of the prospective rate of growth of demand.

In his 1951 *Contribution to a Theory of the Trade Cycle,* Hicks posed the question of why combined negative accelerator and multiplier effects would not mean that an economy could keep going down and 'hit the floor'. Answering that there would be a difference between shorter- and longer-term investment and that the upward trend of the latter, which he illustrated as a rising 'lower equilibrium line', would reverse a short-term downwards trend.

This thereafter happened to coincide with the rising post-war share of public expenditure and investment until 1974, when OECD governments jointly restrained spending and investment to reduce domestic demand, and thus imports, to make way for the higher price of oil and inflation, following the September 1973 OPEC price hikes. Which ended the Keynesian era while by enabling Milton Friedman to claim that governments should limit themselves to controlling money supply, even if this entirely contradicted his earlier assertion that 'inflation starts in one place and one place only, national treasuries' (Holland, 1987b).

Yet such pre-war and post-war analyses of combined accelerator and multiplier effects assumed that these were within national economies. Which since has been overtaken by globalisation in that multinational companies in hitherto advanced economies now not only may be disposed to 'adjust' their stock of capital by outsourcing, but reduce it by investing abroad. Not least as leading US, European and Japanese multinationals have found it 'warranted' in Harrod's sense of an accelerator, to invest in a China that was managing sustained double digit growth from the 1980s, as well as elsewhere in East Asia.

But with inverse decelerator effects, especially in the US, the UK and Japan, with foreign direct investment substituting for exports and thereby reducing national export multipliers, to which, with supporting evidence, we return.

2.5 Unequal Competition and Deregulation

In his analysis of barriers to new competition, Bain (1954) had recognised that an oligopoly could deploy 'no entry pricing' by temporarily reducing price below what would be the variable costs of a potential entrant to a market such as that, if it entered, it could not even pay its wage bill. There is also the concept of 'elimination pricing' (Holland, 1987a) whereby, if an oligopoly is faced by a new entrant with less market power than itself, it could reduce price on a longer-term basis so that the challenger, once entered, then risked going insolvent. Such dynamics represent a challenge for antitrust and competition authorities – since lowering, rather than raising, price is not *prima facie* an abuse of market power.

Yet while the US has had a 15% rule of thumb for non-financial institutions, and the 1890 Sherman Antitrust Act was sufficient to break up Standard Oil, it has none for banks. As Robert Reich (2018) has submitted, as a result of consolidations brought on by the Wall Street crash, the biggest banks today are more dominant than ever, and their shareholders can assume that they will be bailed out if they get into trouble.

That major financial institutions have been able to persuade successive administrations in the US – and the Blair-Brown New Labour government in the UK – that they should not be closely regulated has been a confirmation of Kalecki's 1943 warning that big business could gain a decisive influence on macroeconomic policy. Which was not unrelated to both the US and UK economies facing a decline in their industrial base which increased pressure to enlarge the scope for profit by deregulating finance and privatising public assets and services. Or, as Galbraith (2008; 2014) has forcefully put it, to predate on them.

2.6 Dualisms, Income and Wealth

Ciarli, Lorentz, Savona and Valente (2010) have observed that much analysis of links between economic growth and distributional change has been confined to macro levels. But their findings, as well as those by Brennan (2016), Temin (2015; 2016) and Lazonick (2016; 2017) suggest that the rise of practices such as stock buybacks by leading firms not only has shifted finance away from investment in production, but centrally promoted inequality in both income and wealth.

Temin (2015; 2016) has related this in the US to an increasingly dual economy. The primary or core economy of successful firms, with less than a third of employees, is dominated by finance, technology and electronics – yet includes both the very rich and a rapidly shrinking middle class. The secondary or peripheral economy includes low-skilled workers in more traditional sectors. The outcome of which is that the chances for most Americans to enjoy a middle-class standard of living, are negligible and shrinking.

Lazonick (2016; 2017) has analysed how managers and technical workers in older firms could reasonably look forward to careers within them. By contrast, paralleling Brennan, he found that within what he calls 'New Economy' firms, managers offered stock options on a vast scale to increase personal wealth, while dismantling older career ladders. Such firms cut back on R&D. Whereas federal agencies – synergising pure research in academic or other institutions and sponsoring major innovations – (Lazonick, 2016; 2017; Block and Keller, 2011; Mazzucato, 2011; 2013) have enabled some firms to leap from micro start-ups to global giants. Such as promoting Google's algorithm, the GPS with its myriad positive and more contested applications, touch screen displays as well as more than a dozen of the key components for Apple's iPhone and related apps.

In effect, a key factor in the concentration of wealth since the end of the Keynesian era, as identified by Piketty (2014), is explained not only by his stress on the reduction of progressive taxation, but also by the difference in a dual economy between meso corporations whose chief executives can afford high incomes and bonuses for themselves and for their own high flyers, albeit with Icarus-like risks, and micro firms whose employees receive a shrinking share of income and many of which now are struggling for survival.

Drawing on Temin and Lazonick, the effects of dualism in the US also have been submitted by Ferguson, Jorgensen and Chen (2018) to have implications for understanding why for millions of people in the US the 'American Dream' has become a nightmare in terms of not only lack of social mobility, but also marginalisation and social exclusion.

3. The Dangers of Systems Thinking

It has been recognised in philosophy, sociology and other social theory, rather than economics, that David Hume greatly influenced his younger fellow Scot, Adam Smith. For example, Hume castigated a 'passion for hypotheses and systems', warning that they were a common source of 'illusion and error' (Hume, 1751, pp. 173, 175). Drawing on this, Smith observed that those disposed to systems thinking 'attempt, to no purpose, to direct, by precise rules, what it belongs to feelings and sentiments only to judge of', submitting that 'their frivolous accuracy almost necessarily betrayed them into dangerous errors' (Smith, 1759, pp. 499-450).

What we submit below is that such systems thinking at macro levels has displaced recognition of the dominance of global investment and trade by multinational capital. As in an alleged Heckscher-Ohlin-Samuelson theorem which neither was Heckscher's nor Ohlin's but Samuelson's, compounded by Samuelson's error in assuming that mathematics can reveal economic 'truths'. Also we suggest that the axiomatic hold of general equilibrium in mainstream economics has traduced Walras who stressed that this was only a conceptual device that he had not managed to dynamise to gain more realism.

Also we suggest, in terms of the meso concept, that mainstream economics has neglected not only that Walras had a 'theory of the firm', but also recognised that monopoly and cartels already dominated smaller enterprise and needed to be countervailed either by mutual societies or outright public ownership and control. Besides disregarding his stress that such social and public ownership should be not only on economic but also on *moral* grounds.

3.1 Traducing Walras

There appear to be as many economists who have routinely referred to Walras on general equilibrium as never have read him. With the irony, and error, that they disregard that he stressed that this was theoretical rather than realistic. Thus, in his 1898 *Studies in Applied Political Economy,* he recognised that he had not managed a dynamic theory of equilibrium, only a comparison of static equilibria, and that this was a major limit to any analysis of production, distribution and exchange, and needed to be overcome. As he put it:

> 'All aspects of social wealth, other than land, are subject to constant movement, of appearance and disappearance. But for my equations of production, as in my *Elements of Pure Political Economy*, I supposed the movement of economic production and consumption stopped for an instant in order to consider the conditions for an equilibrium' (Walras, 1898, p. 336).

Then adding that:

> 'In working this way I have done what mathematicians do who, to rationalise mechanics, elaborate the static *before* the *dynamic*. If there are savants who have found a way to reverse this in economics, one can only wish that they decide, before too long, to include us in their remarkable discovery' (Walras, 1898, p. 336, his italics).

But, since him, the savants of neoclassical economics neither have made such a discovery nor can do so – as long as they stay trapped within comparative static analyses of equilibrium. Against which Pareto (1909) also warned – on the grounds that any such comparisons would need to be very short term, since otherwise technical progress would falsify them.

Further, there is virtually no reference in any introduction to economics, whether Keynesian, monetarist or otherwise, to Walras opting to work for years in the cooperative movement before becoming an academic and strongly advocating the merits of mutual societies, rather than limited liability companies whose shareholders were not individually liable for failure (Walras, 1865). Nor that he presciently warned that banks with limited liability could be driven by competition to heighten shareholder value by speculating with, and losing, depositors' funds.

There also has been a lack of awareness that Walras was an advocate of public ownership of land, other public infrastructure and utilities including water, gas and electricity, in a manner which later would come to be known as a social or mixed economy. Thus he claimed that competitive private rail transport, rather than a single integrated public system, would raise user costs since needing to generate profits for shareholders, imply external diseconomies if companies with different efficiencies used the same track, and be suboptimal (Walras, 1875). Little of which was taken into account in the privatising of rail transport in the UK, yet which confirmed him to be correct (The *Guardian*, 2017).

Besides which, recognising the already evident trend to monopoly in his own time, with trusts in the US and cartels in Germany, Walras made the case for 'moral monopolies' and 'public economic monopolies' which would be both socially responsible and non-profit:

> '[I]n the case of a moral monopoly run by the state for the benefit of the community, the products which are public services can and often must be given away free while, in the case of [public] economic monopolies… it is enough for products to be sold at cost and not at a profit maximising price' (Walras, 1875, p.85).

Next to none of this has been recognised by the mainstream. Thus of 75 papers in two volumes totalling some 1,270 pages edited by David Walker (2001), only three directly address Walras on social economy rather than his general equilibrium theory. *The International Encyclopaedia of the Social Sciences* (1968) merely mentions his 464 page 1896 *Études d'Économie Sociale* in one line without giving any indication of what it is about. Even as distinguished an economist centrally concerned with social justice and welfare as Amartya Sen (1977) has not been immune, as in his contrasting the value-based ethical approach of Adam Smith in his 1759 *Theory of Moral Sentiments* with what he claimed to be the 'technique focused economic engineering' of Walras.

3.2 Ricardo, Samuelson and Myths of Comparative Advantage

Paul Romer has indicated that his early work was motivated primarily by observation that, in the broad sweep of history, classical economists like Malthus and Ricardo came to conclusions that were completely wrong about prospects for growth (Romer, 1983; 1986, 1994). But Ricardo not only was wrong in this regard, but also entirely misleading in his claims on comparative advantage. Such as that, in asserting mutual gains from trade between England and Portugal (Ricardo, 1817), he needed to assume no capital mobility, admitting that otherwise lower cost Portugal would have an advantage in both cloth and wine.

Yet this was a deceit, since it was English capital that had developed the main wine trade from Portugal – in port – through companies such as Churchill's, Croft, Dow, Gilbey, Graham, Offley, Taylor and Warr, whose brands still dominate it. Which Ricardo would have known since his family for generations had been based in Portugal and because port was well recognised as both the addiction – and affliction – of the English upper classes of which, by then, he was part. While free access to Portugal for British cloth since the Methuen Treaty of 1703 was already causing many Portuguese textile producers to relocate to lower cost Brazil (Serrão, 1975). Which was not evidence of comparative advantage without capital mobility, but of nascent multinational capital (Holland, 2015b).

Capital mobility also profoundly qualifies the alleged HOS Heckscher-Ohlin-Samuelson theorem of comparative advantage, which is neither Heckscher's (1919; 1950), nor Ohlin's (1933) but Samuelson's (1948; 1949) – and entirely unrealistic in not recognising such mobility.

Heckscher and Ohlin assumed a factor proportion basis for trade with countries specialising in capital- or labour-intensive goods on the basis of whether they were capital or labour abundant. But Heckscher, who originally published in Swedish in 1919, and only by 1950 in English, had been making his case from data in a colonial era before WW1, when some less-developed countries either lacked manufactures or, as in the case of India, were forbidden to export them. Ohlin was also well aware of differences in capital and labour mobility and realised that, with inhibitions on labour migration, factor flows would be asymmetric and that comparative advantage therefore would not necessarily maximise global welfare. As well as presciently observing that foreign direct investment and production could substitute for exports from a country of capital outflow.

In an article in the *New York Times* in 2004, Samuelson allowed that the economies of China and India can combine low wages, increasingly skilled workers and rapidly improving technology. He put his case in terms of a labour market 'clearing wage' that has been lowered for all countries by globalisation, and observed that: 'If you don't believe this changes the average wages in America, then you believe in the tooth fairy' (Samuelson, 2004b).

Yet it was Samuelson's expositions of comparative advantage, over decades, that gave such a tooth fairy wings. He had displaced both mounting US FDI outflow to Asia since WW2, and that half of China's technology-related exports by the time he wrote this were from foreign direct investment (Yadev, 2010; McKinsey, 2010). Which, at much lower labour costs, was yielding Smith's absolute advantage – rather than Ricardian comparative advantage. For, as Smith (1763) presciently had put it in his Glasgow Lectures:

> '[t]he cotton and other commodities from China would undersell any made with us were it not for the long carriage, and other taxes that are laid upon them' (Smith, 1763, in Napoleoni, 1975, p. 141).

Krugman gained more realism in comparative advantage by allowing for economies of scale within a Chamberlin monopolistic competition premise (Krugman, 1979a; b; 1980; 1981). This was evidence-based at the time – in that the expansion of trade up to that point since WW2 had mainly been between the triad of the US, Europe and Japan (Ohmae, 1982) and thus between countries with similar factor endowments – rather than those which were more capital or labour intensive. In this he showed that product differentiation could account for how similar, though not identical, products could attract consumers in different countries with comparable levels of income, and that their producers, thereby, gain from increased economies of scale in a larger international market.

Yet Ohmae, in his 1982 study *Triad Power,* was wrong in assuming that this was *The Coming Shape of Global Competition*, as he claimed in its subtitle, since trade from the 1980s increasingly was to be between countries with different factor endowments and in which foreign direct investment through the capital mobility – that Ricardo denied and Samuelson displaced – was to enable labour-intensive China to gain Smith's absolute, rather than Ricardian comparative advantage.

3.3 Stripping Out Psychology

Akerlof and Shiller (2009) have, rightly, related Keynes' animal spirits to the reasons for the 2007-08 financial crisis. Yet well before the rise of monetarism and the demise of Keynesianism, Samuelson had stripped psychology and uncertainty from Keynes. In a paper in 1942 on economic theory and mathematics, and in his 1947 *Foundations of Economic Analysis,* he claimed that just as progress in mathematics had advanced physics, similar advances in mathematics could advance economics as a science (Samuelson, 1942, p. 1; 1947, p. 284).

This proved highly influential, despite Samuelson's *Foundations* at the time meeting mixed reviews, including from some of those who were to be among the most eminent of post-war economists. Criticism was focussed on three main areas: that he had assumed that instability, if it occurs, will be transient and less typical than stable equilibrium; that he focused on mathematics, with very little economic content; and that he paid no attention to the uncertainty in expectations that Keynes had stressed in chapter 12 of *The General Theory*. Yet, in citing this, and recognising that Samuelson remained sceptical of much of the neoclassical orthodoxy that emerged in the 1960s and 1970s, Backhouse has observed that 'his *Foundations* provided a toolbox for those who developed that orthodoxy' (Backhouse, 2015, p. 36). Not least, in Samuelson's presumption in his *Foundations* that economics could reveal 'truths'. Which he thereafter made in his highly influential *Economics* textbook in multiple editions from 1948. Thus, at the time that Minsky (1975) was warning that Keynes without psychology and uncertainty, was Hamlet without the Prince, Samuelson was claiming that:

> 'The first task of modern political economy is to describe, to analyse, to explain, and to correlate the behaviour of production, unemployment, prices and similar phenomena… To be significant, descriptions must be more than a series of disconnected narratives. They must be fitted into a systematic pattern - i.e., constitute true analysis' (Samuelson, 1976, p.7).

Samuelson had based this on an assertion in his *Foundations* that that logic in language and mathematics were identical:

> 'Mathematics is language. I mean this quite literally… For in deepest logic – and leaving out all tactical and pedagogical considerations – the two media are strictly *identical'* (Samuelson, 1947, p. 40, his emphasis).

This is precisely what Wittgenstein had assumed in the algebraic 'truth functions' and claims for 'logical atomism' in language in his *Tractatus* (1922), which also had a parallel in the claims for 'atomistic competition' in neoclassical microeconomics. Which, after challenge from Sraffa (Malcolm, 1958), Wittgenstein then abandoned in seminars at Cambridge that were to be published posthumously as his *Philosophical Investigations* (1953) and other later work (Wittgenstein, 1958; 1980; 1982). Which then influenced the evolution of post modernisms in philosophy, sociology, other areas of social analysis (Sluga, 1999; Summerfield, 1999) and in law (Patterson, 2004), while Keynes already had been influenced by the later Wittgenstein before he completed *The General Theory* (Coates, 1996; Davis, 1993; 1996).

Yet there has been no similar post-war evolution in an economics mainstream that, with Samuelson, has presumed that economics is a science, similar in its analytical and predictive power to physics. Which has been compounded by many graduates in mathematics, or physics, being recruited by economics faculties with no grounding either in philosophy, the history of economic thought or economic history.

3.4 Irrational Expectations – and Pareto's Pangloss Warning

Key reasons for 'too big to fail' not only were pressures that leading financial institutions brought to bear on the US Treasury to reduce capital reserves, and on Congress to repeal the Glass-Steagall Act, but also that this was encouraged by Nobel benedictions for theorists of 'efficient markets' and 'rational expectations' (Fama, 1965; Fama and French, 1992; Lucas, 1972; 1976; 1996: Merton, 1973; 1997; Scholes, 1997).

There have been many critiques of how such theories opened the gates to the flood of toxic financial derivatives, fictitious capital, and the greatest financial crisis of the western world since 1929. One of their deepest flaws was in presuming perfect information for individual agents – not only in their own, but all markets, with an omniscience normally reserved only for deities, and not even for those already all too human, such as in Greek mythology. While rational expectations had also leapt from being an assumption in micro theory (Muth, 1961) to macroeconomics without demonstrating evidence for any bridge between them.

This was initially criticised less by economists than by several management theorists (e.g., Cyert and March, 1963; Edwards and Tversky, 1967; Vroom and Yetton, 1974). Simon (1978; 1979) stressed that the theory was normative and lacked evidence on how decisions in business environments were actually made, while he claimed that decision-makers do not sum weighted probabilities of all possible outcomes but 'satisfice' with the first that either fits or fits well enough (Simon, 1987). Which gained widespread resonance thereafter in management theory – but not in the economics mainstream, despite Simon gaining an economics Nobel and also being published in the *American Economic Review* (Simon, 1979).

Moreover, in projecting strings of past prices into the future, the theorists of rational expectations and allegedly efficient markets neglected that Pareto had warned that to presume that the past could be projected into the future could be a significant displacement of risk. Thus, in chapter 1 of his *General Principles of Social Evolution* (1909) he allowed that we tend to equate current utility with what was previously useful to us, which we know from experience. But that projecting this into what we expect from the future, is different for two main reasons. First, no individual actually can foresee the consequences of a present decision; second, that:

> ‘something that risks being bad in the future is not represented with sufficient intensity in consciousness to balance what may be good in the present’ (Pareto, 1909, p. 46).

He then commented that this can lead to ungrounded optimism that ‘ends by resembling that of Dr Pangloss in Voltaire’s *Candide*’ (Pareto, 1909). Voltaire’s most famous claim for Pangloss, surveying the ruins of Lisbon after the earthquake of 1755, was his insistence to Candide that he still was convinced that ‘all is for the best in the best of all possible worlds’. This both savagely, if unfairly, parodied Leibniz, yet was to be paralleled in the survival of rational expectations and efficient market theories – even after the collapse in 1998 of the Long-Term Capital Management (LTCM) hedge fund, a decade before the subprime fiasco, and which had already required a major bailout organised by the Federal Reserve to avoid a systemic financial crisis. And again, the 2013 Economics Nobel awarded to Eugene Fama – even though he was still supporting theories that paved the path to the crisis of 2008.

Further, while Pareto reasoned in terms of derivatives as in calculus, and used it, he stressed that such derivatives are not facts but a ‘conceptual scheme of the mind’ (Pareto, 1909). He also extended the concept of derivatives beyond calculus to what may be derived from commonality in what people say and the beliefs that they hold, i.e. precisely the ‘narratives’ that Samuelson disdained, which is the method that has since become known as discourse analysis in grounded theory (Charmaz,1994; Shah and Corley, 2006). Which is consistent with Hayek’s claim that finding that different people: ‘perceive different things in a similar manner… must be regarded as a significant datum of experience which must be the starting point in any discussion of human behaviour’ (Hayek, 1942, p. 37).

4. Regaining Realities

What follows in terms of regaining realties stresses that it is foreign direct investment – neglected by both Ricardo and Samuelson – that has driven post-war trade, both promoting uneven global development and qualifying exchange rate changes for countries with high ratios of foreign investment relative to exports, such as the US. It outlines meso qualifications of investment-savings liquidity-money IS-LM theory and the disavowal of this by Hicks as early as the 1960s. While stressing the initially successful role of meso level credit institutions in financing industry in Europe and the US before banks and hedge funds sought to make money from speculative derivatives, and the success of such institutions for decades in Asia. It also seeks to deconstruct macro fiscal policy, and draws unduly-neglected lessons from public finance through bonds in the Roosevelt New Deal, with implications now for bonds to finance both social and environmental investments and higher levels of employment in the EU.

4.1 Foreign Investment, Not Comparative Advantage, Drives Trade

Consistent evidence from the United Nations Conference on Trade and Development (UNCTAD, 1973; 1991; 2009; 2011; 2013) shows that it has been foreign direct investment (FDI) by multinational companies – rather than comparative advantage – that has driven post-war global trade. Further, while Keynes was right on key issues such as effective demand,

and the role of psychology, he was wrong in assuming – like Keynesians such as Kaldor – that trade was between different companies in different countries (Holland, 1987a; 2015b; 2017a). But with as yet, still under-recognised implications. Since asymmetric outcomes from FDI, such as recognised by Hymer, not only challenge HOS theories of comparative advantage, but also question whether balance in international trade can be achieved by the managed exchange rate changes that underlay Keynes' proposals for the Bretton Woods system – for three main reasons.

1. There will be an 'export substitution' effect if companies which had been exporting from one country then invest in, produce and export from others.
2. If companies are producing in other countries and then export to the country of investment outflow, this will tend to increase its imports, with an 'import promotion' effect.
3. For such companies to follow through a devaluation or depreciation of a currency with lower prices in others would be to compete against themselves or an 'own competitor' effect (Holland, 2015b).

The 'own competitor' effect from foreign direct investment was suggested in findings decades ago, from the devaluation of sterling in 1967 which signalled the beginning of the end for the managed exchange rate system of Bretton Woods. For, at the time, foreign production by leading UK firms was more than double visible exports, whereas that for Germany or Japan was only two fifths of exports (UNCTAD, 1973).

Two analyses in the 1970s of the effects of the 1967 sterling devaluation, including a study of the top 220 exporters which accounted for two thirds of British visible exports, found that none of them had chosen to lower export prices because of the devaluation, and that where some of them had done so, it was for other reasons – such as price strategies either to gain foreign market entry or to deter new entrants (Hague, Oakeshott and Strain, 1974; Holmes, 1978).

Export substitution and import promotion effects from FDI explain, in large part, long-standing post-war US trade deficits. Since for decades, it has been the most multinational of all economies, with foreign production by its firms more than four times its visible exports. Robert Lipsey and Irving Kravis showed that, by the early 1980s, exports from the US by American multinationals had fallen to less than half their exports from other global locations (Lipsey and Kravis, 1985).

Such effects also give more explanatory power to the slowdown in growth of the Japanese economy than the alleged Heckscher-Ohlin-Samuelson theorem. In a survey of 3,200 subsidiaries of 1,250 companies in Japan in the early 1980s for the Japanese Ministry of International Trade and Industry, it was found that 78% of them had located abroad to replace exports. They had done this by direct investment in the US to avoid the risk of protection, or, in less-developed Asian economies, to access lower-cost labour, thereby reducing exports from, and export multipliers within, Japan (Kono, 1984).

This is not to claim that exchange-rate changes are unimportant. They are vital for countries with little foreign direct investment, and denying devaluation as a means of adjusting trade imbalances has been a critical disadvantage for Greece and other economies of southern Europe (Varoufakis and Holland, 2010; 2011; 2012). But, while deserving further research, the evidence so far is that the effects are asymmetric for companies with a high degree of foreign direct investment

Thus the revaluation or appreciation of a currency will tend to reduce export competitiveness. A devaluation or depreciation will, in principle, increase it for micro firms – although they may hesitate to increase export volume for a range of reasons, including lack of capacity or of sufficient representation in foreign markets or simply opting to increase cash flow. But it will not necessarily do so for an economy with a high degree of outward foreign direct investment by its corporations, such as the US, since to lower prices in foreign markets in which they already are producers and sellers, would be to compete against themselves.

4.2 Not by Interest Rates Alone: IS-LM and Quantitative Easing

A meso perspective also qualifies the presumption for decades in monetary theory of an alleged Hicks-Hansen IS-LM investment-savings and liquidity-money model (Hicks, 1950; Hansen, 1953) which, at the height of its influence, was described, in a paper for the Federal Reserve Bank of St Louis as the cornerstone of most macroeconomics courses taught throughout the western world (Carlson and Spencer, 1975). IS-LM also was integral to one of the few post-war textbooks to compete with Samuelson's *Economics* by Stanley Fischer and Rudiger Dornbusch, later to be joined by David Begg (Begg, Fischer and Dornbusch, 1987). But this made no distinction between bigger firms with market power and smaller firms without it – and wrongly presumed that investment decisions for all firms were interest rate sensitive.

Whereas Hicks (1980-81) not only later repudiated claims ascribed to him for IS-LM, but already had done so in 1965, at one of his last seminars as Drummond Professor at Oxford, in which one of us was a graduate student. When an American Rhodes Scholar attributed IS-LM to him, Hicks put his head in his hands and said 'Stop, please stop'. The hapless Rhodes Scholar responded 'I'm sorry Professor, have I got this wrong?' To which Hicks replied 'I don't know whether you have got it wrong or right, but do not attribute it to me', protesting that all he had done at the end of his *Contribution to the Theory of the Trade Cycle* (1951) was to suggest such a relationship *if* investment were interest rate sensitive – which it might not be.

While, also, although IS-LM fills reams of literature, next to no attention has been paid to one of the main implications of the case made by Hicks in his *Contribution,* i.e. that cutting long-term investment will lower the floor to which an economy can sink.

In parallel with this we submit that a distinction between interest rate sensitivity for micro firms and little to none for meso firms, where these can self-finance, qualifies the effectiveness of quantitative easing. QE has injected liquidity into banks, but not recovered private sector investment to its pre-crisis trends on a sustained basis in either the US or Europe. The programme has been a major exercise of about €2 trillion and successful in avoiding a further financial crisis. Yet the real economy impact on investment has been minimal (Gros, 2018).

Not least since private sector banks have used the money to recapitalise or, also, in offering it to finance investment, have done so at interest rates which have been prohibitive for small or medium firms yet irrelevant for bigger business which by and large can self-finance investment yet hesitates to undertake it since misguided policies of 'structural adjustment' and alleged 'structural reforms' have been depressing demand.

While, as Knibbe (2017) has well stressed, zero or even negative interests are of no use to pension funds which, on such a basis, cannot meet their statutory obligations. Both they and sovereign wealth funds have lacked adequate private sector investment outlets since the financial crisis. The China Investment Corporation, the biggest sovereign fund in Asia, lost a fortune by still investing in private equities in the three to four years after the crisis, and then declared in 2012 that it was looking for more reliable and longer-term public investment projects (Business News, 2012).

Which is not to say that the ECB, at the highest level, has presumed that QE will recover the European economy. Senior members of the bank have recognised that this alone, rather than a bond-funded public investment programme – such as along the lines of the

Delors White Paper *Growth, Competitiveness Employment* (COM, 1993) – may not do so. Yet have submitted that governments, rather than they, needed to lead on it since bonds are 'fiscal policy' and not their remit (Holland, 2015a; 2016).

4.3 Deconstructing Fiscal Policy

Yet there also are problems from compounding differences within the two words 'fiscal policy'. Thus this can mean changes in taxation, or public expenditure or public investment. Each of which is different in their claims on resources and their economic and social impact. Thus lower personal taxes may mainly increase wealth for those who have it. Lower corporate taxes may only increase retained earnings for corporations and shareholders. Similarly, lower interest rates may increase a propensity to consume, but also encourage unsustainable investment in property – as they did in the run up to the subprime crisis.

It also has been less-than-widely recognised that multipliers from public expenditure and investment also tend to be significantly higher than those from fiscal policy – in the sense of tax cuts. For example, the 2009 Obama American Recovery and Reinvestment Act was undertaken on the basis of a multiplier of close to unity for such cuts, and of 1.6 for public expenditures. Yet the multipliers from public investment projects can be up to double or treble these. Those from European Investment Bank projects range from 2.5 to 3.00, whereas fiscal multipliers tend to range from 1.1 to 1.8 (Blot, Creel, Rifflart and Schweisguth, 2009; Holland, 2015a).

Fournier (2016) has shown that, in a typical advanced economy, government allocating a larger share of total expenditure to good quality public investment, tends to boost growth and productivity over the long term. Fournier and Johansson (2016) also have found that households in many countries could experience income gains of up to a seventh by a shift from current public spending towards public investment.

Yet if public spending or investment is cut, this not only means direct loss of jobs and incomes, as well as loss of direct and indirect taxation, but also reduction of the multipliers which otherwise could sustain the private sector. As has been the case in Europe resulting from misguided theories of 'structural adjustment' and alleged 'structural reforms' which, as indicated at the outset, have been well criticised in research by the OECD (2017). Benoit Cœuré (2014; 2015), French executive director of the European Central Bank, has directly criticised claims for structural reforms as amounting too often to rhetoric, and called for further research rather than just assertion concerning them. A series of studies in papers from the research department of the IMF, under the direction of Olivier Blanchard (Blanchard and Leigh, 2013; Abiad, Furceri and Topalova, 2015; IMF, 2015), also have criticised the neglect of negative multipliers from misguided deflationary policies of structural adjustment.

Whereas public investment, or even fiscal policy in a more general sense, is hardly analysed in the academic mainstream. In a Lionel Robbins Memorial Lecture in 2009, Paul Krugman illustrated this well by citing that of some 7,000 articles published by the National Bureau for Economic Research in the US since 1980, only five referred to any form of fiscal policy (Krugman, 2009a).

Yet fiscal policy also needs more than simply returning to Keynes' concept of effective demand to restore growth, whether by running deficits, or public spending and investment. What now is needed is to meet *latent* demand for more equitable societies, for individual and collective wellbeing, sustainable environments and an institutional framework for governance based on mutual advantage rather than reliance on comparative advantage. Which is implicit in protests against inequality such as 'one per cent' and against a globalisation in which people serve markets rather than markets serve people, to which we return later in this paper.

4.4 Credit, Debt and Finance

In his *Finance Capital* (1910), Hilferding analysed not only monopoly trends in German industry and finance but also how German banks, with government backing, were directly financing big business – and cartels – both by credit and direct shareholdings on a long-term basis, rather than relying on the short-term dependence on stock markets.

This also was the case in Italy, and has been typical of credit and finance in Japan's – meso – conglomerate *keiretsu* and South Korea's *Chaebol.* While, since the Deng Xiao Ping reforms, China's major state owned banks – of which three, since the financial crisis, have been the largest in the world – sustained high macro-investment rates through credit to state enterprise and local governments which, even while generating great inequalities in wealth, has lifted some six hundred million people out of poverty (Wong, 2018).

By contrast with Hilferding, and commenting on the 'amnesia' of modern monetary economics, Adair Turner (2013) has contrasted this with credit and stock market finance in the UK and US and how these have funded almost anything other than productive investment. Suggesting, for example, that probably no more than 15% of lending by the UK banking system had, for years, been financing new investment. While also stressing the negative macroeconomic outcomes of major banks funding debt-on-debt on a massive scale.

4.5 The New Deal – and Bond Finance

It is remarkable that in her address to the 2016 conference organised by the Boston Fed, Janet Yellen made no reference to the 1930's New Deal, despite her concern being to understand *The Elusive 'Great Recovery': Causes and Implications for Future Business Cycle Dynamics*. Whereas, by contrast, Minsky (1986) had paid extensive credit to it in his *Stabilizing an Unstable Economy.* Moreover, the multiple 'alphabet agencies' that enabled the success of the New Deal were not 'micro' with no macro significance, but institutionally meso in the sense of in between micro small and medium firms in crisis, major meso corporations in stasis, and more positive macro outcomes.

Being public and concerned to recover investment and employment, rather than speculating in finance, the New Deal agencies were big enough to succeed rather than too big to fail. Nor was this Keynesian deficit spending. The average fiscal deficit of the US from 1933 to the outbreak of war was only 3% – coincidentally, but also significantly, the target rate of the inversely deflationary Stability and Growth pact of the EU. While Keynes himself was initially remiss on the New Deal. In *The General Theory* his early observations were that it probably would destabilise financial markets rather than recover them.

None of which has been aided by Milton Friedman asserting that government investment and expenditure 'crowds out' the private sector (Friedman, 1953; 1957; 1962) nor that public spending increases necessarily will be viewed by consumers as adding only to transitory income, and thereby claiming that a Keynesian marginal propensity to consume from such spending is zero (Friedman and Meiselman, 1963). Yet he and Meiselman (either wilfully or otherwise) disregarded that the those from bond-financed public investment in civil and environmental projects during the US New Deal were crucial in reducing unemployment from over 20% in 1933 to under 10% by 1940, even if it was only wartime rearmament and military expenditures that reduced this further (Smiley, 1983).

Some economists seeking to support Friedman and Meiselman (e.g. UCLA, Edu., 2004) have done so on the basis of claiming that government-generated employment, such as in the New Deal, does not represent 'real jobs' – which only can be created on and by 'free' markets. Whereas if New Deal employment generation has been deemed unreal by them or others since, it was not for millions in the US in the 1930s, who not only gained jobs but also, thereby, recovered faith in American democracy (Schlesinger, 1958).

4.6 Eurobonds

The relevance of the US New Deal for Europe underlay the case for 'Eurobonds' to be issued by a European Investment Fund – EIF – which was proposed to Delors in 1993 (Holland, 1993), agreed in December that year by the European Council, set up in 1994 and, since 2000, has been part of the European Investment Bank - EIB - Group. EIB bonds do not count on the debt of member states of the EU, any more than US Treasury bonds count on the debt of member states of the American Union, such as California or Delaware, and EIF Eurobonds need not do so. But whereas the management psychology and practice of the EIB has been project-based, the design aim of the EIF was macro – both to offset the deflationary debt and deficit conditions of Maastricht and to recycle global surpluses (Varoufakis and Holland, 2010; 2011; 2012; Varoufakis, Holland and Galbraith, 2013).

In 2012 Eurobonds were overtly opposed by Angel Merkel who declared that they would be introduced 'over her dead body' (Ottens, 2012). Yet without any evidence that she actually understood what bond finance was about. Any more than Helmut Kohl who, when Antonio Guterres in 1996 proposed that bonds issued by the European Investment Bank should be extended to investments in health, education, urban regeneration and protection of the environment opposed this and declared that 'the German taxpayer has paid enough' (Holland, 2015).

But then, when briefed that EIB bonds did not count on German debt, nor needed German guarantees, nor servicing by German taxpayers, Kohl (in 1997) agreed to such an extension of the EIB's investment remit which enabled it in the following decade to quadruple its investment finance and overtake that of the World Bank. Further, despite opposition to Eurobond issues to fund a European recovery by Angela Merkel, these have been supported by Emmanuel Macron (Holland, 2016; 2018). Whether their wider role in enabling a European New Deal could follow the departure of Merkel (Ryan, 2018) and that already of German finance minister Wolfgang Schäuble is open to question. But the institutions in the case of both the EIB and EIF already exist, and issuing Eurobonds does not need a Treaty revision rather than political decision (Holland, 2018).

5. Psychological and Institutional Barriers

It already has been more than a century since Veblen in 1898 asked why economics is not an evolutionary science. To which the barriers may be political – as, in the McCarthy era, with the risks in the US of appearing to be Marxist – or institutional or, in part, psychological. As in how the 'systems thinking' against which Smith warned in his *Theory of Moral Sentiments* relates to Wittgenstein's warning in his *Philosophical Investigations* of being trapped by 'language games' without being aware of, or displacing the unreality of, doing so.

5.1 Displacement, Denial and Projective Identification

These barriers may range deeper in terms of what Melanie Klein (1932; 1952; 1961) conceptualised as not only of displacement and denial but also 'splitting' and 'projective identification'. Klein developed this from her studies of paranoid-schizoid behaviour in disturbed children. Her conceptual framework nonetheless was seen by many psychologists and psychoanalysts to be relevant to everyday life and psychologists influenced by her such as such as Schneider (1975) and Richards (1989) then related it to behaviour in markets. As did Dinnerstein (1978) in submitting that:

> 'the realm of sensuous experience embodied by the mother is rejected in favour of rational worldly activity. Hence the splits between heart and head, feeling and reason, private and public' (Dinnerstein, 1978, p. 130).

Which also is relevant to projective identification of 'pure theory' as if this either is, or should be, how markets actually work. Thereby not only displacing Walras on how theory and practice differ, and warnings from Pareto on risks from projecting past trends into an assumed future. But also is relevant to errors in rational expectations theory in which there was a projection of an 'idealised good' in terms of assuming that decision-makers not only were rational but also had 'perfect' information. While splicing of mortgages that were rated as prime because they were serviced by borrowers who had regular incomes, with those that were subprime, on the basis of projected rather than actual income streams, discplacing that this might be toxic for both. The splitting also had another dimension. It split lenders from needing to know borrowers since the commissions on selling the derivatives were paid 'up front' and then sold on to others, such as European banks, on the assumption that efficient market and rational expectations theories could accurately project future outcomes.

5.2 Institutional Barriers

Bourdieu had reason in his *Homo Academicus* (1984) to cite how hierarchies resist either entry or preferment to those whose views challenge their own, thereby echoing the neglected case of Pareto (1909; 1935) that elites tend to exclude non-elites. While, although neoclassical economics has premised free entry to markets, this has proved less so for new thinking in economics. As Krugman (2008) frankly recounts, his earlier efforts to get published were rejected by established journals such as *The Quarterly Journal of Economics.*

In parallel, Ferguson and Johnson (2018) have highlighted that a problem for a more realistic economics is from 'risk-averse' editors in leading US journals who 'can drive up their impact factors by snapping up guaranteed blockbusters produced by brand names and articles that embellish conventional themes' (Ferguson and Johnson, p. 4). While, even if the case for recovering realities either are accepted for or are reviewed in such journals, they may make no impact on the mainstream.

For example, *The American Economic Review*, in 1994 published an authoritative paper by Bürgenmeier on 'The Misperception of Walras', but without displacing the dominant perception of Walras as an advocate both of 'pure theory' and general equilibrium. Similarly, a concern to distinguish meso from micro economics, and stress the macroeconomic dominance of meso firms, was elaborated in some depth in two volumes some three decades ago (Holland 1987a; 1987b). Where there were mainstream reviews, they were favourable, including in *The Economic Journal* (Singer, 1989) and a double-column, two-and-a-half-page lead review in the *Journal of Economic Literature* which claimed that: 'In scope, comprehensiveness, accessibility and insight, these books have no equal. Economists, especially teachers of economics, are in his debt' (Elliott, 1990, p. 67). Which was not to be the case.

5.3 Timing

One comment was that such rethinking was too early at a time when many economists, including some who considered themselves Keynesians, were being seduced by rational expectations and efficient markets, as also submitted by Krugman (2009a). There as yet had been no financial crisis nor assumptions of 'too big to fail', nor a return of 'depression economics' (Krugman, 2009b).

Nor, in Europe at the time, austerity such as was to be imposed in the Eurozone on pre-Keynesian assumptions of *Ordoliberalismus* and which Blyth (2015), with reason, has deemed a 'dangerous idea' for democracy. Nor how democracy was to be denied in Greece when finance ministers in the Eurogroup – with no basis in any Treaty nor reporting to any parliament – refused to recognise the outcome of both the January 2015 election of a government proposing alternatives to austerity and the July referendum rejecting it.

Nor, in the 1980s, had there been heightened public awareness of the emergence of gross inequalities of wealth and income giving rise to 'one per cent' protest movements and highlighted by Piketty in relation to the decline in progressive taxation. Nor widespread evidence of the precarity of employment, of which Standing (2011) also has warned of dangers. Nor, at the time, a now widespread concern that a neoliberal paradigm of globalisation was not bringing the mutual gains from comparative advantage that hitherto had been assumed to be axiomatic. Nor increasing evidence of a loss of confidence by electorates in mainstream institutions and mainstream policies such as have encouraged calls to end 'ever closer union' in the EU and restore the right of national electorates to elect parties and governments with alternatives to austerity, including the vote in the UK for Brexit (Habermas, 2018; Etzioni, 2018)

6. Alternatives

We already have cited a wide range of alternatives to the mainstream in institutional, evolutionary, heterodox – and mesoeconomics. In what follows, we propose: feasible means for gaining accounting and accountability of meso corporations, banks and other finance; institutional and governmental means for achieving mutual advantage between states rather than relying on assumptions that comparative advantage necessarily will maximise global welfare; and the case for meeting latent demand for liveable and sustainable environments rather than only recovering effective demand.

6.1 Accounting and Accountability

Part of this process concerns rethinking – and extending – national accounts. There are well-recognised limits within these in a concept such as GDP which fails to account for negative externalities from economic growth or to recognise human and social dimensions to wellbeing (Stiglitz, Sen and Fitoussi, 2008). Yet these have not seriously been revised since the 1930s when they mainly measured what Keynes thought important. And, since, have stayed within a macro framework at national levels which has masked the increasing dominance of supply – and finance – by multinational capital.

For such reasons, as well as the inability of governments to foresee or then adequately deal with banks deemed 'too big to fail', we submit the case for a meso dimension to both national and international accounting. For example, while the theoreticians of rational expectations had premised their models on perfect information, when the credit crunch came in August 2007, no one knew how much money had been lost or was at risk for whom or where. The dilemma was how to address an information deficit (Tett, 2007), not least since the Fed had not been concerned to track what major banks, hedge funds or an insurer, such as AIG, had been doing.

At the time of the credit crunch traders in financial markets referred to a 'correlation crisis' between credit and risk (Scholtes, Mackenzie and Ishmael, 2007), despite the Nobel awards to Lucas, Merton and Scholes having been based on claims of being able to correlate them with precision. It then took four years, until 2011, for the European Banking Authority to be able to publish 'stress tests' on 91 banks after which nine that passed them promptly failed. Since when is has committed itself to try once more to determine which actually were solvent or insolvent (Finch, Martinuzzi & Penty, 2011) but without, as yet, transparent success.

6.2 Meso Accounting – and Input-Output

Two decades before the financial crisis and 'too big to fail', it had been proposed that there should be a meso dimension to national – and international – accounts, tracing the multinational reach of banks and big business, and that this could be informed by a meso dimension to input-output (Holland, 1987a, chapter 9). The project was supported by Jacques Delors when he was President of the European Commission, by Yves Franchet, the then head of Eurostat, and also gained the interest of a still very alert Leontief, who recognised that it could enhance input-output by tracing most activity through only some – rather than all – banks or enterprise (Holland, 2015a).

In Europe, there also was, and still is, an institutional basis for doing this in terms of the remit of the Competition Directorate General of the EU Commission which, since the provisions of articles 85 and 86 of the Rome Treaty, has had extensive powers to require information from any enterprise that could, *prima facie*, be abusing a 'dominant position' in a market. Which is the case when multinational corporations both dominate sales and, through transfer pricing and tax havens, pay little or no tax. And could be actionable on the basis that, unless they pay taxes in final markets, in Europe, or the US, or elsewhere, they cannot sell there.

This meso accounting proposal lost momentum after Delors retired from the Commission. However, without using the concept, in seeking to implement the EU proposal for a banking union, the ECB *de facto* is not seeking to gain detailed information from all some 6,000 financial institutions in Europe, but from the 130 or so that dominate macro financial outcomes (Holland, 2015a). And which could be informed by a meso dimension to input-output.

One of the limits of input-output modelling has been that, since seeking to analyse a whole economy, it takes time to collate all available data, correlate it and then project findings several years ahead on fixed coefficients, by which time much of it is out-of-date. Yet this can be overcome not only by advances in computing, but by gaining such data from the few meso firms that dominate outcomes rather than whole sectors. While a meso dimension to fiscal policy is relevant to the feasibility of a Tobin Tax in that this could be introduced for transfers by multinational corporations rather than all international financial transactions.

This could also have political significance in that by gaining both accounting and accountability of bigger business and banks, governments need not subject all enterprise, or all individuals, to Orwellian intrusive scrutiny. Thereby countering Hayek's (1944) claim that any intervention in or to control or to supplement markets would be the road to serfdom. Which itself displaced that Roosevelt had done so, extensively, thereby not only recovering faith in the US in democratic institutions but giving Truman and the post-war US Congress the confidence, from his success, to endorse the post-war Marshall Plan which was crucial in not only gaining European economic recovery, but also a similar recovery of support for democracy.

6.3 Meso and the Environment

One of the challenges that outstrips even another financial crisis is existential in the prospect that asymmetric climate change may be irreversible within 30 to 40 years, or less, that environmental protection through new technologies alone will not deliver a 'technological fix', and that what it needed is to 'take out' carbon both from current emissions and those accumulated from the past.

A UN climate change report of October 2018 (UN, 2018) has warned that to achieve the goal of limiting warming to 2.5 degrees would require the reduction of carbon dioxide emissions to 45 percent of their 2010 levels by 2030, and their elimination completely by 2050. Among environmentalists who already have voiced such warnings, Tim Jackson not only has been one of the most vocal, but also has factored the need for this into a Keynesian macroeconomic model (Jackson, 2009). In which he has recognised both the case for input-output analysis, and for it to map carbon emissions and resource implications at different levels and compositions of aggregate demand.

For which, again, a meso dimension helps. Thus, as cited at the outset of this paper, the Carbon Disclosure Project (CDP, 2017) has shown that 100 corporations have been sourcing over 70%, and 25 over 50% of global carbon emissions.

One of the implications of this comes from Richard Heede (2014) who, as with the CDP report, has designated 90 such corporations as 'carbon majors'. But whose case and findings coincide with what we are forwarding as mesoeconomic analysis. As he does in his suggestion to focus attention on a 'manageable number of entities', rather than only on countries. Thus the United Nations Framework Convention on Climate Change accounts for emissions at national levels. Yet 40 of Heede's 90 'carbon majors' are state firms and 50 are investor-owned corporations. On such a basis the United Nations Environment Programme – UNEP – could in principle adopt and pursue a meso dimension to environmental accounting and accountability. Some countries – and companies – would be opposed. But others seeking to be green in their national strategies, or claiming to be so in their corporate profiles, could cooperate. If UNEP were to adopt such an accounting proposal, and report progress in it on an annual basis to the General Assembly, it could raise the issues concerned to a global political level.

6.4 Funding Carbon Reduction

One of the cases that Tim Jackson makes to counter climate change is for Green Bonds to fund major carbon reduction programmes. Yet he recognises that if these were to be national they would be unlikely to be able to address the scale of the challenge. This is realistic where bond finance counts on national debt – which is limited in principle for EU member states by the Maastricht debt and deficit conditions – and, in practice, in many other countries, constrained by competing claims on national borrowing.

However, US Treasury bonds do not count on the debt of the member states of the American Union. One of the central cases made earlier in this paper and endorsed by employers', trades unions' and civil society representatives on the Economic and Social Committee of the EU (EESC, 2012), has been that bonds issued by the European Investment Bank Group, including the European Investment Fund, either do not, or need not, do so.

Since the Essen European Council of 1997, the EIB has had a specific remit to fund both investments protecting and enhancing the environment and green technologies. This type of funding also can meet the need to recycle under-invested surpluses in pension funds and sovereign wealth funds. Such as in the lament in 2013 of Bill Gross of the PIMCO pension fund – one of these world's largest – that he could not finance pensions with near-to-zero interest rates, which abetted his demise shortly after as its CEO. Paralleled by the earlier-cited 2012 declaration of the China Investment Corporation that it was looking for longer-term public investment projects (Reuters, 2014; Business News, 2012).

6.5 Meso-Cities and Green Demand

There also is another meso dimension to the environment which is not national – cities. And which has implications for generating green production which does not depend on macro demand management

In the spring of 1998, as part of the British presidency of the European Council, and advised by one of us, the Deputy Prime Minister of the incoming Labour Government, John Prescott, launched an *Alternative Traffic in Towns – Alter* project which managed, within months, to gain commitment from over 120 European cities including London, Paris, Berlin, Rome, Lisbon and Athens (with interest also from New York and Moscow) – to introduce low emission zones. On the rationale that if they did so this would give a message to major – meso – vehicle producers that there would be a macro demand shift to 'green'. Which, already, Volvo (involved in the original project) has recognised by now producing only low- or zero-emission vehicles.

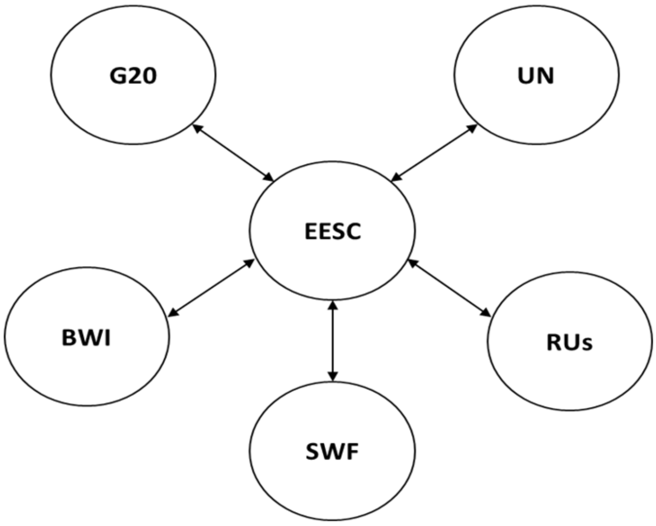
Initially the project stalled. In part, because the EU Commission, in a classic case of inertial institutional logic, claimed that it could not fund more than three cities in an environmental safeguard project. While the EIB had not yet got its act together to bond finance environmental protection on its new 1997 remit. But by now there are more than 200 active or planned low emission zones in Europe, even if their impact varies depending on the design and size of the zone, as well as its enforcement (BUND 2015; Obrecht, Rosi and Potric, 2017). Also, and encouragingly, there is increasing commitment to introduce such zones in China (WRI, 2016).

Low-emission zones reinforce the meso concept, in terms of both pro-social civic institutions and their ability to countervail the market power of corporations. For example, a city such as São Paulo has a population in its greater urban area the size of that of Benelux. Its strategic master plan (São Paulo, 2014) is admirably concerned with both social development and enhancing its metropolitan environment. Yet its measures are mainly remedial, such as treatment of contaminated land and recommending more use of public transport. If it were progressively to introduce, and then widen, a central area low-emission zone, it would not be in the interest of any auto major to seek to sell any vehicles in Brazil that were not low emission. And it could initiate this without waiting for the federal government to introduce legislation.

6.6 Meso Institutions and Global Governance

While allowing exceptions, such as how cities can generate green demand, much of what we have proposed begs the question: whether and how there could be more effective global governance? Which we suggest implies a shift from a global trade model based on comparative advantage to one that can achieve mutual advantage in addressing issues of economic and environmental security. With a synergic framework for an institution such as the G20 which, while meso in the sense of between all nation states and global outcomes, currently lacks even an effective permanent secretariat.

Figure 1. An economy and environment security council



UN - UN Agencies, BWI – Bretton Woods Institutions, RUs – Regional Unions, SWF - Sovereign Wealth Funds

Which, as stylised in the above figure, could be the governments of the G20 nominating the governing body of an Economy and Environment Security Council. This would parallel the UN Security Council. Yet, while the Security Council mainly is reactive, in the sense of crisis management, an EESC should be able address economic and environmental issues in a proactive manner.

Such a Council would be more representative than the G7 and could liaise on its working groups with UN agencies such as UNCTAD, UNEP, UNDP, WHO and the ILO which currently report to the General Assembly but otherwise are advocates rather than actors in global decision-making. To enhance this a representative of the Secretary General of the UN could be a member, if non-voting, of its governing body.

An EESC would liaise with the IMF and the World Bank but not depend only on them nor on further protracted renegotiation of voting rights within them. For several reasons. Despite the openness of Blanchard and others in the research department of the IMF, the senior management of the Fund still is devoted to a neoliberal ideology and a catechism of deflation and deregulation. While the Bank, although having made nominal concessions to intervention in markets, such as industrial policy, still is tending to mirror the interests of the US Treasury and Wall Street, as cited from his own experience by Stiglitz (2003).

Whereas East Asia has been open to more plural forms of economic governance such as was submitted by Wade (1990) against strenuous efforts by the Bank to prevent publication of his *Governing the Market.* Paralleled by the more recent work of Paul De

Grauwe (2017) on the need to govern markets. Besides which the Fund and the Bank lack the resources needed to promote sustainable development – or counter climate change – at a global level. Sovereign wealth funds such as those of China, the Middle East, Norway and, to a lesser extent, Brazil have the resources yet are not institutionally linked with either the Fund or the Bank or the G20.

The decision-making of an EESC, if not unanimous, could be on an enabling basis between states willing to act, similar to that of 'enhanced cooperation' in the EU (Holland, 2003; 2015). But, unlike voting weighted by population in the EU, this could be on the basis of one nation one vote which still would give greater weight to bigger member states in terms of their global significance and greater resources. In the event of one or more governments declining to join, it could be initiated by a G19, or less. Yet if not endorsed by, for example, a Trump administration in the US, but proposed by a major EU member state such as Germany or France, or by China, or Japan, it could gain support from others in the G20.

7. Implications

In line with others cited earlier in this paper, we have suggested that a concept such as meso can synergise commonality in several heterodox approaches as well as informing synergies between institutions and policy outcomes. We therefore invite responses to and suggestions in areas such as those below – while recognising, and welcoming, that there may well be others.

- Post Keynesian Analysis
Analysing meso-macro dynamics by moving beyond Keynes' presumption that the supply side of an economy could be left to perfect or imperfect competition. Recognising that Keynes' marginal efficiency of capital, as well as accelerator-decelerator and capital stock adjustment principles, is no longer national but global for transnational corporations. Matching his concern to recycle global surpluses yet shifting fiscal policy from deficit finance to generate effective demand to recognising and meeting latent demand for social and environmental investments through regional and global bond finance.

- Post Marxian and Kaleckian Perspectives
Confirming a Marxian perspective such as Hymer's on the now global role of a reserve army of labour as a lever of capital accumulation, but qualifying assumptions of declining rates of profit for meso firms with multinational reach and price-making power. Relating 'too big to fail' to crisis theory in terms of declining rates of profit in traditional sectors in advanced economies, and to both the pressures and incentives for speculative finance with deregulation. Critiquing the commodification of labour and social services as capital seeks to privatise social institutions in health and education, and other public services. Updating Kalecki's perception that oligopoly not only qualifies neoclassical micro theory, but also compromises key principles in mainstream macro theory.

- Monetary Policy and Credit
Qualifying IS-LM theory by evidencing to what extent meso corporations are influenced – or not influenced – in their investment decisions by interest rates. Analysing the role of credit policies by either public or private major financial institutions, in either 'real' or 'fictitious' financial investments, and their related welfare, or negative social, effects.

- Fiscal Policy and Financial Transactions
Sampling estimations of the fiscal loss for different countries from transfer pricing by given categories of meso corporations. Analysing the feasibility of a Tobin style financial transactions tax for meso, rather than all, international financial transactions.

- Exchange Rate Policy
Assessing the degree to which multinational corporations follow through the devaluation or depreciation of the dollar with lower prices in their exports, or do not do so due to an 'own competitor effect'.

- Foreign Direct Investment and Trade
Evaluating export substitution effects from multinational FDI (as submitted by Ohlin) but neglected in mainstream comparative advantage theory. Assessing import promotion effects from multinational FDI (importing back to the country of FDI outflow from lower cost global locations). Estimating the share of exports from China and other East Asian economies from US companies locating and producing there, and the degree to which this may compromise both economic and political support for protection against them.

- Accounting and Accountability
Evaluating and potentially enhancing the decision of the European Central Bank to directly assess only 130 meso banks rather than the 6,000 financial institutions in the EU, and modelling their influence in terms of meso-micro matrices in input-output analyses.

- ***Public and Social Multipliers***
Evaluating public and social sector investment, employment and income multipliers – in the sense that construction of a hospital or high speed rail link with public funds generates private sector contracts, jobs and income – including fiscal multipliers from both direct and indirect taxes generated by such public and social sector multipliers.

- ***Bond Finance and Crowding-In***
Estimating the crowding-in effects of bond-issuing public financial institutions, both in the EU (such as the EIB) and in individual European countries (such as with the KfW in Germany, the Caisse des Depôts et Consignations in France and the Cassa Depositi e Prestiti in Italy) as well as the BNDES in Brazil.

- Bond Finance and the Environment
Assessing the scale on which bond finance by meso financial institutions such as the EIB Group and Brazil's BNDES can meet the green funding challenge posed by Jackson not only for environmental protection, but also to 'take out' carbon.

- Carbon Majors and the Environment
Reinforcing the work and findings of the Carbon Majors Report in the 2017 Carbon Disclosure Project by deploying input-output to trace the carbon footprints of meso corporations to inform policies on environmental protection and, especially, carbon reduction.

- Cities and the Environment
Evaluating how cities such are reducing carbon emissions by their introduction of low-emission zones, and the degree to which a major urban area such as São Paulo could do so with demand generation for zero- or low-emission vehicles.

- Social Economy

Relating the meso concept to analysis and management of social institutions whether in less or least developed countries and in countering command-and-control hierarchies in health, education and social services in the more developed. Doing so in terms of how this can gain from a distinction of macro institutional, meso organisational and micro operational levels, while assessing the case for greater relative autonomy for hybrid management at intermediate and lower levels

- The G20 and Global Governance

Assessing a meso institutional approach for more effective global governance, such as a G20-nominated Economy and Environment Security Council, with an enabling, rather than binding, decision-making procedure. Allowing that this might need to be a G19, in the event that a US administration did not support such an initiative. Yet recognising that a G19, or less. could include most of the world economy and that decisions by many of its members could register significant global outcomes.

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