RESEARCH PAPERS

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MARKET POWER, PRICE FORMATION AND PRIMARY COMMODITIES

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LIST OF ABBREVIATIONS

bn billion

c/lb US cents per pound (weight)

EU European Union

FAO Food and Agriculture Organization (of the United Nations)

GVC Global value chain

ICA International commodity agreement
ICO International Coffee Organization

IMF International Monetary Fund

LDC Least developed country

m million

OPEC Organization of the Petroleum Exporting Countries

PRSP Poverty Reduction Strategy Paper

TNC Transnational corporation

UK United Kingdom
UN United Nations

UNCTAD United Nations Conference on Trade and Development
UNRISD United Nations Research Institute for Social Development

US United States of America

USSR Union of Soviet Socialist Republics

WTO World Trade Organization

EXECUTIVE SUMMARY

There has been widespread concern for many years over the very abstract nature of orthodox economic theory, especially that of the neo-classical school which has dominated the profession since the late 19th century. Such disquiet is frequently felt among non-economists, but a great many dissident economists have also expressed their disquiet over the years. A large part of the difficulty centres on the concept of "perfect competition", not least the explicit removal from the basic theory of economics of the notion of market power.

This is of importance for development today for two reasons. Firstly, the pressure placed on developing countries since the 1980s has been to liberalise, deregulate and open up markets in all areas of their economies; that pressure continues in spite of extensively reported evidence of its damaging effects. Secondly, there is specific concern in areas of trade which are vitally important to developing countries, and the poorest countries in particular - agrarian in economic structure and commodity-dependent in international trade as they are. In recent years, many people who have investigated the crisis of commodity prices have linked it closely with declining market power among agricultural producers, combined with excessive power at the buyers' end of international supply chains.

This paper argues that the bias of conventional economics needs to be replaced with a more realistic theoretical basis, which will hold market power at its core. It can be divided into three parts. First of all the paper discusses the challenges to the basis of economic theory that have been posed over a long period, and especially challenges to the fundamental concepts of perfect competition and general equilibrium. Along the way, it notes the astonishing number and variety of leading economists who have themselves commented on their discipline's failure to explain adequately how markets work and how prices are formed, although one might have thought that those were at the very heart of its subject matter.

There have been some attempts in recent years to incorporate political aspects of market processes into market analysis, and an excellent framework has been provided in value chain analysis. As the second component of the paper, an attempt is made to explain the process of price formation, in which everywhere and always prices mediate between the relative economic power of the demand and supply sides of a market. This argument is then elaborated with a discussion of certain concepts such as market structure and market failure, which can help us to understand the complexities frequently observed in actual markets.

As its third element, the paper discusses market power and market failure on international commodity markets, and makes some broad recommendations to tackle them. The key findings are in two areas. Firstly, that market power exists on all markets; even where it might not be apparent at first sight, on those markets which come closest to resembling the "perfect" ideal, it is sure to be found at the local level if the market is disaggregated sufficiently. It is argued that changes in the balance between supply, demand and price on a national market will often be the cumulative result of market power exerted on the supply or demand side in various localities.

The second group of findings relates to the operations of commodity markets, which are held to fail frequently in their function of efficiently mediating between supply and demand via the price mechanism. On the problem of commodity buyer power, the paper recommends exploring the possibilities of global competition policy. To deal with oversupplies and declining prices on one hand, and commodity price volatility on the other hand, it recommends a detailed exploration of the possibilities of supply management by public authorities on those international markets that are most critical to developing countries' success. Then it makes complementary proposals for policies to be pursued by developing countries at the national and regional levels, and some suggestions for further research.

PREFACE

Conventional economic analysis of markets by and large ignores or marginalizes the presence of power which is a glaringly visible characteristic of real markets.

Gordon White, political scientist, 1993¹

There are few established areas of intellectual endeavour which can arouse such scepticism, bafflement and even downright hostility among non-practitioners as economics (sometimes known as the "Queen of the Social Sciences"); nor where – at least in this author's opinion - related areas of study can so often appear to provide better explanations of a topic than the main discipline itself does. There are many possible reasons for this, but one is surely the unconvincing theoretical basis on which economics is built.

There has been widespread concern for many years over the abstract nature of this theory, especially that of the neo-classical school which has dominated the profession since the late 19th century.³ Such concern is frequently found among non-economists, but a wide variety of economists have also expressed their disquiet over the years. The names of several will crop up during the course of this paper. A large part of the criticism centres on the concept of "perfect competition", and not least the explicit removal from the underlying theory of economics of the notion of market power.

This is of importance for development today for two reasons. Firstly, all the pressure imposed on developing countries since the 1980s has been to liberalise, deregulate and open up markets in every area of their economies; that pressure continues in spite of extensively reported evidence of its damaging effects. The understanding of what markets are and how they operate clearly matters in this context.

Secondly, it relates to specific concerns about the effects of market power in areas of trade, which are vitally important to developing countries, and especially the poorest of them. In recent years, many people have linked the crisis of commodity prices with declining market power among agricultural producers (especially those in developing countries), combined with excessive and growing power at the buyers' end of international supply chains.

This paper is about market power – economic power as it exists on markets, how it is exerted on them and what influence this has, including in the way that prices are formed. There have been occasional previous pleas to take political aspects of market processes more seriously. In the context of development studies, some political scientists have developed a power-based analysis of markets. Their aim is to provide a more complete depiction, for example, of rural markets in developing countries than conventional economics does.⁴ Something similar has occurred with reference to interna-

¹ White (1993A), p. 4.

² Abba Lerner in "The Economics and Politics of Consumer Sovereignty," *American Economic Review*, Vol. 62 (May 1972), p. 259, quoted in Bowles and Gintis (2000), p. 18.

³ In the literature, the term "neo-classical" is often used loosely. In this paper the terms "mainstream", "orthodox" and "conventional" economics will be used where we wish to make it clear that we include dissident schools as well as more unequivocally neo-classical ones. The term "neo-liberal", which is also in wide use today, will be avoided because its meaning is even less precise than "neo-classical".

⁴ See Olsen (1993) for an example.

tional trade. A highly developed method now exists to identify where concentrations of power lie on international markets, in Global Value Chain analysis.⁵

In 1993, an issue of the Institute of Development Studies' *IDS Bulletin* was published with the title, "The Political Analysis of Markets". Its editor, Gordon White, criticised the model of the market which is found in the conventional discourse on development issues:

One notion is particularly dominant, implicitly or explicitly: "the market" seen as a flexible, atomistic realm of impersonal exchange and dispersed competition, characterized by voluntary transactions on an equal basis between autonomous, usually private, entities with material motivations.

White described this model as "a simplistic and misleading caricature which can obstruct understanding and distort policy". He went on to suggest:

Perhaps it is time to take economists on at their own game: they have used a "choice-theoretic" framework derived from economics to analyse social and political processes; let us develop a "power-theoretic" framework derived from the study of politics to analyse economic processes.⁸

This paper takes up that challenge and will apply it to the central process of the market itself, the mechanism by which prices mediate between quantities supplied and quantities demanded. It will argue that the bias of conventional economics needs to be displaced by a more realistic theoretical basis, which will hold market power at its core. It will examine the role of market power in price formation on markets in general, and primary commodity markets in particular, and offer an alternative explanation of the interplay between supply, demand and prices, built on the understanding that relative economic power is inherent to this process on all markets at all times. The paper argues that the price mechanism always and inevitably depends on the market power of the supply and demand sides in a transaction.

However, neo-classical economic theory pitches its arguments at a high level of abstraction, a ground of debate which its proponents chose long ago. Those dissatisfied with the theory must therefore be prepared to demonstrate its inadequacies at this level too; that is so even if their dissatisfaction arises from a concern that the theory is *excessively* abstract and divorced from the realities of economic life. Again, this paper takes up that challenge.

⁵ An excellent introduction to this may be found by reading some of the papers available at www.ids.ac.uk/ids/global/valchn.html

⁶ IDS Bulletin (1993).

⁷ White (1993A), p. 1.

⁸ White (1993A), p. 2.

I. OF MARKETS, PERFECTION AND EQUILIBRIUM

The idealized setting of perfect competition is defined in part for the very purpose of allowing a description of a situation in which there is no power of one person over another at all.

James M. Buchanan, public choice theorist (and Nobel Prize winner), 1986⁹

There are numerous ways in which economic activities can be organised and resources allocated across society. Any society faces an implicit set of choices about how to satisfy its wants and needs, arrange production and distribution, and exchange with other societies. One of these is via the market. The market can be simply defined as a meeting point where goods or services are offered and acquired, their prices being able to fluctuate in such a way that the quantities supplied and demanded will match each other. There is no need at this stage for any grand theoretical declarations, for example about the general allocation of resources. The function of a particular market is bound up with the function of the price mechanism within it: a means to enable the quantity of the product offered for supply to equal the quantity demanded. ¹⁰

However, the market is but one of several possible means of determining who gets what in society, and how. The system of competitive private markets on the basis of which the capitalist world has developed over the last 200 years is not the only one imaginable or the only one which has ever existed, even in recent times. The allocation of resources was decided in the USSR mainly by central state planning, under feudalism by the hierarchy of services and obligations and under slavery by the whip. In a free-market system, the method chosen is in effect the free-for-all. However, even in countries with highly developed market economies, many important functions of the state or society are run by other means without reference to the market.

Decisions about distribution can be made by democratic process, as they are for example in membership clubs. This method may at times be clumsy or inefficient but it should be more egalitarian – and politically preferable as it depends on open debate. It is the main method used for the last 60 years in such a typically capitalist country as Great Britain for the provision of health care and education. Although over recent times the country's government has made determined efforts to replace it with quasi-markets and private contracts, these sectors remain in their essence free public services supervised by an elected Parliament and paid for out of taxes; and they are popularly supported as such against the free-marketeers, who have to operate by stealth whenever they wish to alter them.

This fundamental choice is political because it involves the arbitration between conflicting interests. The term "political" is used here in the sense defined by White, to refer to "the process whereby power is mobilised and exercised to achieve individual, institutional or collective goals by means of cooperation, compromise, conflict, domination, exploitation, coercion and the like." The fact that the interests involved are *economic* is neither here nor there.

To choose a *market* system of allocation in other fields means abdicating a more openly political choice – and, quite obviously, favouring those sections of society that will gain most from the market, whoever they may be. It is emphatically *not* an apolitical decision, as is often argued in its defence.

⁹ Buchanan (1986), p. 21.

¹⁰ This paper discusses numerous theoretical questions about markets. These are placed in the wider context of economic theory and social scientific thought in the Appendix on p. 31. ¹¹ White (1993A), p. 2.

This is immediately obvious once one accepts that the market, based on power relationships, itself amounts to a kind of political institution.

Now, it is important to be wary of terminology which unconsciously accepts the ideological framework of a market-dominated system. This is particularly true in the English language, where that terminology is commonplace and usually passes unnoticed for what it is. Thus, for example, it is debated whether and how much governments should "intervene" in the markets of their countries. This derives from economic theory, where it is posited that a government's interference in markets will risk upsetting the balanced allocation of resources that markets are held to create. At its strongest, advocates of this way of thinking present the "dictates" of the market as immutable laws to which all societies should submit, removing the "interference" of politics and "regulation" from the "free" operation of the economy. But this is a very partial way of looking at the relationship between politics and the market economy. A believer in democracy might with equal vigour ask whether markets should be permitted to "intervene" in the political process – for example, when businesses lobby a government for this or that favour, or foreign exchange dealers speculate against the currency of a country whose government does not behave as the owners of financial assets would like. However, the question is never put in this form.

This paper shares with neo-classical economics a view that the price mechanism, based on the interplay between supply and demand, plays a critical role in regulating the market economy. It also accepts that all prices are inherently arbitrary, rather than based on an objective valuation such as the labour value ascribed by Karl Marx and others before him. Mainstream economic theory – including its Keynesian and other non-Marxist variants – is built on the three pillars of supply, demand and price, and their interaction in the market place. Abstracted from all other considerations, it is held that a change in one of the three variables will stimulate corresponding changes in the other two, leading the market to find a new equilibrium in which the quantities supplied and demanded are again equal but probably at a different price. However, we depart from all versions of neo-classicism in holding market power to be the *key determinant of prices*, since it creates the relative weights of supply and demand on a market at any given time. So it is this paper's contention that the assumed properties of perfect competition do not hold – in particular, the notion that within the perfect market, market power would be of no consequence; and it is therefore argued that an alternative explanation of market processes is required.

A major problem lies in a set of questionable assumptions on which the further theoretical structure of orthodox economics is built. The foundation stone is the concept of the "perfect market" (or "perfect competition"). Several assumptions lie behind it, but from our point of view the most important is that both buyers and sellers on the market will be so small and numerous that none individually has the power to affect the price by their purchase or sale decisions. This "perfect" market, it is maintained, will automatically generate an "equilibrium" price at which supply and demand are equal, with no conscious human intervention in the process: the correct price is "discovered" through the impersonal action of what Adam Smith in the 18th century called an "Invisible Hand". It is considered that economic power therefore would not exist on a perfect market – or at any rate that it would be so widely dispersed as to be entirely negligible.

With this concept, mainstream economics has seemed since the late 19th century to wish away the notion that market power could be at all fundamental, regarding it as more of a special case which the basic theory of the perfectly competitive market can ignore. However, some eminent economists have acknowledged that if the assumed properties of perfect competition do not hold, then the whole edifice of their theory might be at risk – for example, Frank Hahn:

¹² Adam Smith, *The Wealth of Nations*, Book IV Chapter II (p. 423 in the edition edited by Edwin Cannan, New York: Modern Library, 1937).

When market power is present the Smithian vision of the invisible hand is lost. Instead of the machine-like response of agents to prices, the agents will find themselves engaged in a game. That is, it will be necessary for them to take account of the decisions of other agents and, in particular, they may have to consider how these decisions are affected by their own. Their choices will now be among strategies. Here, economists are not agreed even what the appropriate notion of an equilibrium should be. 13

Certain other idealised criteria also apply to the perfect market, such as that all participants have "perfect information": that is, they know everything there is to know about the state of the market on both the demand and supply sides. In this world, it is held that the market will reach a state of equilibrium, in which the quantity supplied of a product will equal the quantity demanded and its price will remain stable. In the purest form of this concept, as theorised by Vilfredo Pareto, ¹⁴ it is argued that this is a static state in which no reallocation of resources could make anyone better off without at least making one person worse off – in other words, it would contain the best possible allocation of resources. This very abstract view of "general equilibrium", developed by authors like Léon Walras and Pareto in continental Europe, forms the basis of modern neo-classical economics although it has been argued that it departs significantly from the ideas of the "classical" economists and their followers in Great Britain. ¹⁵ More sceptical critics reject the notions of general equilibrium and perfect competition altogether, arguing for example that their conceptual power lies "in many areas, including those murky ones that serve the 'vested interests.'"¹⁶ Hahn lends some support to this view:

When demand for anything exceeds its supply the price will go up, and vice versa when supply exceeds demand. In taking this account seriously, one finds oneself studying a rather complex dynamic system. It is a fact that this study has not led to the conclusion that this behaviour of price must guide the economy to its tranquil equilibrium. Indeed, almost the converse is true: only very special assumptions seem to ensure this happy outcome.¹⁷

Nevertheless, many who accept that a perfect market never has and probably never could exist in real life still defend the concept as a device to clarify thought about actual markets. Those aspects of actual markets which depart from the limiting assumptions that apply to the perfect market are then described as "imperfections". The familiar problems of market economies, such as unemployment and inequality, are explained as due to those "imperfections" in the system, which by implication ought to be removed. This is another use by economists of heavily biased, unscientific terminology: despite the theory's claims to be philosophically "positive" and therefore free of value judgments, the clear inference from this sort of language is that the free private market is the best and needs to be restrained as little as possible. These imperfections might take such forms as inappropriate government "intervention" in the market, excessive trade union power or oligopoly in production. As argued by Fine, this applies even to the recent "new" forms of economics, which make a claim to being opposed to neoclassicism: what they seek out are the responses to "market imperfections", whether they are to be found within the economy or elsewhere.

A leading Keynesian economist, Nicholas Kaldor, pointed out:

¹⁴ See (in French translation) Pareto (1927).

¹³ Hahn (1982), p. 6.

¹⁵ See Blaug (1992), p. 163. For a description of Pareto's theory of "optimality", see *ibid.*, pp. 122-26.

¹⁶ Dowd (2004), p. 134.

¹⁷ Hahn (1982), p. 14.

Unlike any scientific theory, where the basic assumptions are chosen on the basis of direct observation of the phenomena the behaviour of which forms the subject-matter of the theory, the basic assumptions of economic theory are either of a kind that are unverifiable – such as that producers "maximise" their profits or consumers "maximise" their utility – or of a kind which are directly contradicted by observation – for example, perfect competition..., wholly impersonal market relations, exclusive role of prices in information flows ... and perfect foresight. ¹⁸

James M. Buchanan, one of the founders of public choice theory,¹⁹ went so far as to write: "The idealized setting of perfect competition is defined in part *for the very purpose* of allowing a description of a situation in which there is no power or [*sic*] one person over another at all."²⁰ But this "idealized setting" is entirely imaginary, and is admitted to be so by most of its advocates. For my own part, I find it hard to understand why describing an imaginary (and probably impossible) situation should be considered useful in helping to explain what goes on in the actual economy. What is the point of describing a situation "in which there is no power of one person over another at all"? There *is* no such situation and there cannot be. Human society does not work like that. Much better, surely, to observe what actually goes on in the markets and then work up theories that will explain it.

In its origins – or at least in Adam Smith's hands in the 18th century - political economy did more or less that. Periodically other economists have also attempted it, but their writings have been marginalised by the profession and, by now, largely forgotten. An interesting example is Weber, who was a professor of economics before he branched out into wider inquiries and became one of the founders of sociology. However, he never lost his interest either in the way that markets operate, as one of the most important social phenomena of the world he lived in, or in the origins of market capitalism in Europe; and he explained the former as based on power and conflicting interests. Weber spoke of "the battle of man against man in the market" and stressed that monetary prices are always the result of a power struggle between the parties. He defined competition as "a 'peaceful' conflict ... insofar as it consists in a formally peaceful attempt to attain control over opportunities and advantages which are also desired by others."

In mainstream economics, market power is either ignored by assuming it away as a condition of the perfect market or accommodated in special theories of monopoly or oligopoly. "Imperfect competition" has recently been more or less absorbed within the orthodox framework. William Baumol is credited with extending this theory in the early 1980s with his concept of "contestable markets". He held that restrictions to market entry and exit are more important barriers to competition than market concentration and advanced the concept of a "perfectly contestable market", defined to be one "into which entry is completely free, from which exit is costless, in which entrants and incumbents compete on completely symmetric terms, and entry is not impeded by fear of retaliatory price alterations. But this was another ideal type which Baumol himself compared with the perfectly *competitive* market – and admitted to be just as rare, or just as unrealistic. Baumol was also at pains to demonstrate that equilibrium could exist in a perfectly contestable market, again matching the orthodoxy. As we will see in the next chapter, Joseph Schumpeter anticipated these ideas some 40 years earlier, but placed them in a more realistic theoretical setting.

¹⁸ Kaldor (1978).

¹⁹ A school which manages to evade the issue of power even while applying economic theory to the state. See Baland and Platteau (1993), p. 18.

²⁰ Buchanan (1986), p. 21 (emphasis added).

²¹ Swedberg (1994), p. 265, citing Weber (1968 and 1978), *passim*.

²² See Baumol and others (1982).

²³ Baumol and others (1982), p. 349.

II. SUPPLY VERSUS DEMAND

It seems that economic science has not yet solved its first problem – what determines the price of a commodity?

Joan Robinson, Keynesian economist, 1966²⁴

The Nobel Prize-winning economist R.H. Coase described an approach often used by economists,

...which I have termed "blackboard economics." The policy under consideration is ... implemented on the blackboard. All the information needed is assumed to be available and the teacher plays all the parts. He fixes prices, imposes taxes, and distributes subsidies (on the blackboard) to promote the general welfare. But there is no counterpart to the teacher within the real economic system... In real life we have many different firms and government agencies, each with its own interests, policies, and powers.²⁵

In the economics classroom the price mechanism is generally reduced to a mathematical game, in which curves representing supply and demand are plotted on a graph against the axes of quantity and price, and it is shown that the price will settle where the two curves intersect. This is an important insight, and on the lecturer's blackboard a slide down the supply curve when the demand curve moves inwards looks simple and undramatic, and the explanation seems precise and orderly. Usually it is followed without a pause by an ever more elaborate series of curves on the same graph, which illustrate more advanced concepts such as elasticities of supply and demand, marginal cost and consumers' indifference curves. These are the elements of neo-classical price theory, and they are beguiling. However, the crucial process in which the supply of a product meets demand for it on the market, and a price is found for it, gets quickly left behind and, ultimately, ignored. Many people are not persuaded by this approach precisely because they consider that the multiplicity of "interests, policies, and powers" is what matters in markets.

The essential argument of neo-classical price theory makes intuitive sense; but it is the elementary case of Coase's "blackboard economics". ²⁶ It makes the actors on a market look passive, whereas they have to be active in order to survive under the rigours of competition. It is worth quoting Coase at some length here:

The entities whose decisions economists are engaged in analyzing have not been made the subject of study and in consequence lack any substance. The consumer is not a human being but a consistent set of preferences. The firm to an economist, as Slater has said, "is effectively defined as a cost curve and a demand curve, and the theory is simply the logic of optimal pricing and input combination." Exchange takes place without any specification of its institutional setting. We have consumers without humanity, firms without organization, and even exchange without markets.²⁷

²⁴ Robinson (1966), p. 79.

²⁵ Coase (1990), p. 19.

²⁶ See p. 5 above.

²⁷ Coase (1990), p. 3; he cites Martin Slater, Foreword to Edith T. Penrose, *The Theory of Growth of the Firm*, 2nd edition (White Plains, NY: M.E. Sharpe, 1980), p. ix.

Few explanations of the orthodox theory consider what this implies for the workings of the price system. Yet the social process by which, for example, a fall in demand leads to a decline in price is absolutely critical to real economic results. How is it determined which producers have to cut their production and which have the power to remain in business or even expand? What are the implications for the various participants in the market process?

A central problem with orthodox economic theory is that, despite its elaborations about utility functions, elasticities of supply and demand, marginal cost pricing and other matters, it fails to examine the *social* process through which a change in demand, supply or price will actually cause changes in the other two variables. This is what this chapter will consider.

This is not the place to go into basic definitions of "power". The question is too complicated. As Weber commented, "The concept of power is sociologically amorphous".²⁸ But of direct relevance to our inquiry, White proposed four "dimensions" of market power:

- a) **the politics of state involvement**, either through regulation or direct participation by the state in economic processes;
- b) **the politics of market organisation**, by which he understood collective actions by market participants, such as internal regulation and joint lobbying;
- c) **the politics of market structure**: the realm of economic power in which control over assets and opportunities on the market can involve relations of dependence, dominance and exploitation; and
- d) **the politics of social "embeddedness"**, in which the power relations inherent in social and cultural institutions, ideologies and value systems condition market processes.²⁹

To these might be added a fifth, more essential dimension: the politics of market transactions and price formation. This is more specific than White's third dimension of market structure and will be discussed here. It could be illustrated with reference to many different markets. For example, the international oil price has recently gone up sharply and stayed up. Why is this? Surely it is agreed that the main reason is the increased bargaining *power* of oil producers – on the supply side of the market. This in turn is based on a rapid increase in demand in China and elsewhere, combined with shortfalls in supply from such countries as Iraq. The power of the supply side is further augmented by the practice of many leading producer countries to coordinate their production and sales policies via OPEC. Now, in this market nobody would seriously contest the importance of market power – not just that of the OPEC countries and other leading producers such as Russia, but also the big oil companies such as Exxon and Shell. But power interests do not disappear in a market which is more fragmented (and "perfect") than the oil market. The same considerations will apply, even if it takes longer to identify them and they work in different ways and at different levels.

The everyday language about markets is full of terms which refer to economic power: defenders of the market system themselves refer to market *forces*, while most others use concepts like the bargaining *power* involved in a transaction, as we have just done. Many analysts of modern agricultural markets refer to the dominance on them of *buyer power*, arising from high degrees of market concentration among food-processing companies or, more often, retailers, frequently compounded by excess production on the supply side. ³⁰ In a situation like this the consumer has greater power in the (im-

²⁸ Weber (1968 and 1978), Vol. 1, p. 53. Steven Lukes' book, *Power*, starts with a substantial chapter describing the numerous different definitions of it. See Lukes (1986), "Introduction", pp. 1-18.

²⁹ These are defined in White (1993A), pp. 2-3, and examined in White (1993B), pp. 5-10.

³⁰ A good introduction to this thinking may be found in Vorley (2003).

plied) price negotiation than the producer, and is therefore better able to achieve a result which is in his or her interest (a lower price). This is not a neutral, mechanical process: there are social consequences on the producer side to this access of consumer power, as jobs may be lost and supplier businesses weakened or bankrupted.

In these examples there is an evident conflict of interests between the supply and demand sides. But surely this is true on any market and, implicitly, in any transaction. The balance between demand, supply and price *necessarily* depends on the respective amounts of power possessed by the participants in the market at a given time. The mediating factor is price. Price is basically determined by reconciling the opposed interests of sellers in having it as high as possible and of buyers in having it as low as possible (complicated by the competition between buyers among themselves and between sellers among themselves). For the purchaser of a product to "win" a reduction in its price, evidently they need the power to do so. For its suppliers to win an increase in the market's price, they too need comparable power. Price formation involves a constant struggle in which the respective amounts of power on the two sides determine an always provisional outcome. This is a general proposition which applies to all markets, no matter what their structure. And watching this contest being played out in public is what makes the observation of financial and commodity markets so fascinating.

However, prices can be determined in many different ways. The position is clearest in situations where each transaction is determined after a separate negotiation, in which the buyer and seller reach a specific bargain over the quantity supplied, aspects of its quality, and the price. In the commodities trade this occurs most frequently with bulk products such as iron ore, in which long-term contracts are generally negotiated once a year. A more widely known example exists in the transfer fees for professional footballers. The world's best players can "command" higher fees than others for the removal of their contract from one club to another, as well as higher wages. This indeed reflects their "scarcity value" (a concept of neo-classical origin) – but that merely explains the reason for their (or more precisely, the club's) *power* to ensure a greater sum is paid.

It is surely no accident that similar terminology is used when discussing market transactions of this sort to that applied to political and diplomatic negotiations: "the rich language of politics which pervades everyday discussion of economics", as White put it.³¹ The terminology is used not only where each purchase and sale is unique and therefore a discrete event, such as footballers' transfers, but also where thousands of identical items are traded in the same place every day, as with the standardised trading "lots" of a commodity futures market. Here too, the fluctuations of price are routinely described in terms of the relative strengths and weaknesses of the production and consumption sides of the market. Ultimately, the same considerations apply even in arenas where prices appear to be fixed and the supply and demand sides are at arm's length from each other, for example when we go to a shop to buy the simple requirements of everyday life such as newspapers, bread and soap. This is examined in our next chapter.

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³¹ White (1993A), p. 2.

III. MARKETS AND COMPETITION

It is a peculiar fact that the literature on economics ... contains so little discussion of the central institution that underlies neo-classical economics – the market.

Douglass North, institutional economist (and Nobel Prize winner), 1977³²

Because of the very absence of rules, domination which originates in the market or other interest constellations may be felt to be much more oppressive than an authority in which the duties of obedience are set out clearly and expressly.

Max Weber, economist and sociologist, 1986³³

This chapter explores the dynamics of competitive processes on the market (whether in bargaining between the supply and demand sides or between various actors on one side or the other), set against fundamental concepts of neo-classical economics such as general equilibrium and perfect competition. The theory of perfect competition states that individual buyers and sellers lack power to determine prices on the market by virtue of their infinitesimally small size. Yet it is accepted that market processes alter prices and the quantities supplied and demanded. Surely, for this to happen, it has to be *made* to happen in some way by those setting the prices of what they personally buy or sell. This requires some form of power on their part.

Now, the concept of a market is surprisingly elusive. Newspapers regularly report on "the car market" or "the market for computer games", and we see precise calculations of the share of sales which accrue to this or that company. Yet if we see the market as the arena in which competition is played out, we soon stumble across questions about where the focus of competition really lies. Thus, we find that copper companies compete among themselves to gain copper sales and get the best price for their own product. But at another level they all collectively compete with, for example, aluminium companies, which produce a wire that has similar properties and can be used for similar purposes such as electricity transmission. It is said to be a substitute product. At another level still, both compete against optic fibres for the transmission of telecommunications.

What we see in fact amounts to a kind of hierarchy of markets: those for copper and for aluminium wire; for conductive metals; and for materials that transmit telecommunications. Separate markets – or elements of them - can be aggregated or combined to define other markets at another level. Thus, copper wire (but not sheet, tube, etc.) combines with aluminium wire (but not sheets and die castings) to form a market for metal transmissive materials.

By the same token, almost any market can be *dis*aggregated into smaller components at a lower level. It is by examining this that the fallacy of the perfect market is exposed. Let us take the market for vegetables as an example. Vegetables are (or used to be) sold in small shops in all localities of any developed country. The model of perfect competition might seem to hold if we look at a particular greengrocer's shop round the corner from my home in Brighton, England, and set it against the whole of the vegetable market – or the narrower markets for lettuces or potatoes - across the whole of the

³² From "Markets and Other Allocative Systems in History: The challenge of Karl Polanyi", *Journal of European Economic History*, Vol. 6, pp. 703-16 (1977), quoted in Swedberg (1994), p. 257.

³³ Weber (1986), p. 33.

United Kingdom. If that shop has to close for a day, it will not have any appreciable impact on the total availability of those goods around the country – or even, quite likely, across Brighton. At the national level therefore it seems to lack any market power.

But the national market itself breaks down into a huge number of local markets for the same goods, whether in the county of Sussex, or the city of Brighton and Hove, or the neighbourhood in it where I live. Let us suppose that a new shop opens on the street, which is part of a national chain and therefore benefits from economies of scale which permit it either to purchase its vegetable supplies more cheaply or require lower mark-ups on their sale. This is happening at the present time all over the United Kingdom and in many other parts of the world, and is proving controversial in many countries. The new shop has the *power* to bring down local prices for lettuces and potatoes, reducing the profits of the local businesses that cannot match its economies of scale and, quite probably, eventually forcing some or all of them out of the local market. That, then, is not "perfect" competition. But the same thing can happen, but probably more slowly, if a small local business happens to be run more astutely, or opens for longer hours, or benefits from some additional source of capital, and manages to undercut the other shops along the road for price or in other ways outcompete them. In even the most apparently atomistic of actual markets, such as that for retail vegetables, we therefore see that at the local level the market is far from displaying "perfect competition" and market power does exist.

All those local markets around the country (where similar things may be happening) accumulate to create the national market. If the price of one of these products changes nationally, it can be the result of the aggregated operation of market power in hundreds or possibly thousands of local areas. On the other hand, if such market power attached to no one anywhere on the market, nothing on the market would surely ever change: there would be no change in the goods supplied or demanded or in their price. And that is clearly nonsense. Even in a so-called "perfect" market, there will be aggregations of local market power, which are precisely what drives the price system that mediates between supply and demand. However atomised the market may be, the basic relations of supply, demand and price remain determined by the balance of collective power exercised by buying and selling agents. The "hand" is not really invisible at all but is guided by the collective strengths of the actors' arms.

Several authors have conducted research into the political relations that obtain among participants on Indian grain markets. They frequently conclude with a similar emphasis on the importance and complexity of the political structure which obtains on these markets. "Far from being a simple layer between producers and consumers, real grain markets present a bewildering diversity of institutions, organizational forms and technical functions", as Harriss-White concluded. 34 Although this was not the focus of her research, she noted that, "In South India, 120 varieties of rice have their prices tracked, with constrained substitutions possibilities and complex, seasonally-changing, spatial flows. The market for rice is therefore a bundle of economic markets."35

The implications are best understood at the "micro" level. For few markets are indivisible. While the overall outcome of competition may be to produce a price which prevails across the whole national or international scene, this is the cumulative result of jostling for position between local participants in the market. While it may appear that no buyer or seller can individually influence the price of the commodity more widely, he or she may do so locally. And it is from the aggregation of local price struggles that the "macro" market outcome emerges. The "perfect" market can be disaggregated; and once we look at it in that form, we see that the pieces it decomposes into by no means satisfy the assumptions on which the model is based.

So the dynamic interplay between the *interests* of market participants is an essential feature of any market: how they mobilise their competitive forces in order to win the outcomes they desire. Al-

³⁴ Harriss-White (1993), p. 54.

³⁵ Harriss-White (1993), p. 55 (emphasis added).

terations in the market (e.g. higher prices) arise when one such economic force gains an advantage over others. In his illuminating appraisal of Smith's concept of the invisible hand, Hahn wrote:

If, however, we recognise that actual agents are involved in changing prices because they have transitory or permanent market power we shall also start to get a grip on the theory, by exploiting the really basic axiom that agents are out to improve themselves. This kind of analysis is in its infancy and there are no general results to report.³⁶

As we have seen, in the 24 years since Hahn's words were published, numerous economists have investigated the implications if one of the key assumptions of the perfect market is relaxed: that of full access to information. "Asymmetric" access to information is an important source of market power. Many hypothetical cases of the operation of market power have also been examined with the aid of game theory. However, this is a theoretical tool, the interest of which is limited to such hypothetical or made up – cases. It is not an instrument that lends itself to the empirical analysis of real-world situations.

With respect to another basic assumption, that agents will lack any economic power on the perfect market, economic analysis does not seem to have "grown up" much at the hands of mainstream economists in that time. Robinson, one of the few leading economists of an earlier generation who did confront this question, displays a similar disappointment with the possibilities offered by conventional theory:

As soon as we recognise that the market, by its very nature, is necessarily a scene of conflicting interests, every element in it (such as we saw above, the price of cocoa beans) becomes a moral and political problem. This is tormenting because there are no longer any "principles of economics" to provide safe and simple rules for finding the correct solutions.³⁷

Perhaps the biggest fault in mainstream theory lies in its very determination to find "safe and simple rules" rather than examine the complexities of the real world for what they are.

Now, the field of business studies implicitly recognises a power struggle in such complex and dynamic competitive markets, using as a basic axiom the military concept of "strategy". It is time that economic theory caught up with this. Much of business studies (and indeed much of the "business" of business) is about how the company can maximise its power on the markets on which it buys and sells, in order to maximise profits. Seen in this light market competition is not, and cannot be, a politics- or power-free affair. Differences between markets alter the forms that the struggle over prices takes and the degrees of market power in the hands of various participants, but they do not affect the basic process. Nor is it cost-free for society. The market economy, guided by Adam Smith's "Invisible Hand", often seems to those subjected to it more like an Invisible Boot.

Both Schumpeter and Weber made important insights along similar lines in the first half of the 20th century, but they are ignored in most economics teaching today. Weber understood the conflictual nature of the market and went on from there to theorise about wider social processes; but as we have seen, the trend in economic theory at the time was in the opposite direction, trying to analyse economic processes strictly on their own terms, divorced from other social events. Over the decades this too has led to important insights, but as a guide for a *basic* theory of economics, we find it hard to accept its validity.

³⁷ Robinson (1979B), p. 164.

³⁶ Hahn (1982), p. 14.

Schumpeter anticipated both Bain in the 1950s³⁸ and Baumol in the 1980s³⁹ when he argued in the 1940s that even the monopoly industrialist could feel – indeed, did feel - constantly under threat from the competitive process. But unlike them, in making this argument Schumpeter explicitly rejected the notion of market equilibrium. 40 He did believe in a form of the concept of perfect competition, but he understood that capitalism is not static. On the contrary, he described it as "an evolutionary process" and insisted that it "never can be stationary". Its essential feature was what he called the "process of Creative Destruction", which "incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one." 41 He went on:

In capitalist reality as distinguished from its textbook picture, [what] counts [is] the competition from the new commodity, the new technology, the new source of supply, the new type of organization (the largest-scale unit of control for instance) – competition which commands a decisive cost or quality advantage and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives. 42

Neo-classical economists argue that free competition among profit-seeking firms tends to the efficiency of production and distribution. No doubt that is the case. But along with Schumpeter, one might also stress even more strongly than they do the creative character of such competition. However, as he emphasises, it is just as much destructive. Indeed, the unfettered market economy, with most of the means of production, distribution and exchange in private hands, has a rare capacity for destruction. The competitive process may create winners but it also creates many losers, sometimes very suddenly and traumatically.

Weber, on the other hand, emphasised the tendency under capitalism towards the development of monopoly power. For him, the essential dynamic of the market is not competition but the sociological concept of closure. 43 As has been widely discussed by others, the dynamic of competition can rapidly lead to concentrations of economic power which will create a market very different from the "perfect" ideal. This is the tendency for capital to concentrate and firm size to grow ever larger, which has gone on almost unchecked since the days of the pin-making workshop described by Adam Smith over 200 years ago. It was already analysed painstakingly by Marx by the middle of the 19th century.

³⁸ Bain (1956).

³⁹ Baumol and others (1982).

⁴⁰ Schumpeter (1976), pp. 79-80; this was the fifth edition of a book first published in Great Britain in 1943.

⁴¹ Schumpeter (1976), pp. 82-83 (emphasis in the original); see Chap. VII, "The Process of Creative Destruction", in general. This book was first published in Great Britain in 1943, and in the United States before that.

⁴² Schumpeter (1976), p. 84.

⁴³ See Cawson (1993), p. 63.

IV. MARKET STRUCTURES

When economists do speak of market structure, it has nothing to do with the market as an institution but refers to such things as the number of firms, product differentiation, and the like, the influence of the social institutions which facilitate exchange being completely ignored.

R.H. Coase, originator of transaction costs theory (and Nobel Prize winner), 1990⁴⁴

The specialised field of industrial economics provides useful guidance for situations where market concentration steps over into oligopoly or monopoly. It also helps, to a degree, in the analysis of contemporary situations of "buyer power" on agricultural markets, which amount to "oligopsony" rather than oligopoly. Frederic M. Scherer, one of its pioneers, stated as a rule of thumb that, "When the leading four firms control 40 percent or more of the total market, it is fair to assume that oligopoly is beginning to rear its head." An analysis of declining market concentration in the aluminium market supported this contention, as the dominant firms lost their cohesion just as the combined market share of the four biggest was falling below 40 per cent. 46

An essential concept in industrial economics is that of "market structure". Scherer's definition of it covers the following elements:

- Number of sellers and buyers
- Product differentiation
- Barriers to market entry
- Cost structures
- Vertical integration
- Conglomerateness.⁴⁷

However, the word "structure" has been applied to markets in a much fuller way by other types of analyst, capturing their complexity and variety, including that of their methods of price formation. Such variety is very striking between one commodity market and another. The problem is summed up in Coase's words which are at the head of this chapter, emphasising "the influence of the social institutions which facilitate exchange".

And "institutional economics" is one of the most influential branches of the "new economics" which Fine discussed in his article in *World Development* in 2002. ⁴⁸ The leading thinker behind it was Douglass North, ⁴⁹ whose work brings together Coase's concern for transaction costs with the rooting of economic theory in social and historical reality, placed in the context of asymmetric or incomplete information. North himself summed it up thus: "Information processing by the actors [on the market]

⁴⁴ Coase (1988), p. 8.

⁴⁵ Scherer (1980), p. 67.

⁴⁶ See Lines (1990), p. 248.

⁴⁷ Scherer (1980), p. 4.

⁴⁸ See Chapter 1, above.

⁴⁹ See North (1990), especially Ch. 12 ("Institutions, economic theory, and economic performance").

as a result of the costliness of transacting underlies the formation of institutions."⁵⁰ North's ideas have been very influential since the 1990s - in development policy, however, more in an emphasis on national economic "governance" than in the functioning of markets themselves. The word "governance" is used rather imprecisely in this context, but in practice it appears to mean mainly the extent to which states provide the institutional basis for, or otherwise facilitate, the development of market systems. It does not touch on the operation of key markets themselves or the power play that goes on within them.

As we saw above, one of White's four "dimensions of market power" was defined as the politics of market structure, but for him that meant something very different from these economists' ideas of market structure. In an article in the same journal, Wendy Olsen reports on a case study of rural markets in India, investigating "the ways in which power is exercised in a system of economic exchange in which there is a close connection between credit markets and crop markets."51 She describes what she calls "the structure of economic exchange", and in doing so draws, like Barbara Harriss-White, on the work of Indian political economists who analysed rural markets before her. In a contribution to another important book, Harriss-White recently emphasised the complexity of markets, the role of history in understanding them and the need to place their institutions in the contexts of property distribution and power, including their role as expressions of class domination and subordination.⁵² However, not even she goes so far as to argue that political considerations, or market power, are *inherent* to the process of price formation; merely that power and politics have various forms of influence that should be fully examined.

The complexity of the structures concerned stands out from Olsen's page; they include not only social and political elements alongside the economic, but a greater variety of economic matters than are included in the conventional definitions of "market structure" which we have seen. This is illustrated in an extended passage in which Olsen sets her own approach next to that of two Indian predecessors, K. Bharadwaj and A. Bhaduri:

In their [Bharadwaj's and Bhaduri's] schema, the landlords were simultaneously the village moneylenders, and had power stemming from this dual position as well as from their assets and status within the village system...

Clearly these theories of political economy overlap with economic ideas such as monopoly and interlinkage. But as Bharadwaj stressed, the competition/monopoly continuum is only one, very partial, dimension of local power in markets. Even after modifying this approach to allow for interlinkage of markets and interlocking of transactions, there is still a diversity and complexity in local market exchanges that requires explanation. An improved explanation requires (i) distinguishing types of power...; and (ii) fully assessing the historical, social, and personal sources of power in the real markets studied.⁵³

This wider view of "market structure" seems essential for a proper understanding of the commodity markets too – and by extension, probably of markets in general. As a preliminary, rather loose, definition, market structure could be understood to signify a complex bundle encompassing at least the following items:

- The size and extent of the market
- The nature, number and degree of concentration of its participants on both the supply and demand sides (drawing on the work of industrial economics)
- Technological requirements and their market implications

⁵⁰ North (1990), p. 107.

⁵¹ Olsen (1993), p. 83.

⁵² See Harriss-White (2003).

⁵³ Olsen (1993), p. 86-87.

- Social relations between market participants, including their relative market power and the reasons for it, and
- Methods of price formation and their relationship with the other factors just mentioned.

There is a bewildering variety of ways in which primary commodities are traded on world markets, and in which their prices are determined. Each price formation mechanism corresponds with a different combination of influential factors on the market, in the broader sense of "market structure" which is defined above. This entails, for example, the different roles played by producer corporations and traders or brokers – and, in the case of futures markets, of speculative funds. Six systems of price formation can be readily identified on mineral markets, without any claim that the list is exhaustive or mutually exclusive (various methods of price formation can co-exist in the trading of the same commodity). Each one is defined below, set against a short indication of a market structure associated with it. The complexity will become immediately apparent:

a) "**Producer prices**" declared by the market's dominant corporations, as was the case until the mid-1980s for nickel and aluminium.

A substantial degree of corporate concentration (and therefore market control) is required for a producer-price system to operate, as in the former pricing system for aluminium and in diamonds (see below). Technological factors can also be important, such as the place in the production and distribution process where the main area for value added may be found; in aluminium it is in the energy-intensive process of smelting but in copper at the mining stage, and this structural factor (in the sense just defined) has a big influence on the politics and the pricing systems of those markets.⁵⁴

b) A **marketing monopoly** controlled by one dominant producer, as in the Central Selling Organisation for diamonds, run by De Beers.

A test for a producer-controlled market lies in what happens if and when the market share of a dominant producing company or group of such companies is diluted: do they lose to traders their determinant position on the market, as happened on the aluminium market, or retain it in a different form, as De Beers succeeded in doing when its South African mines lost their near-monopoly of worldwide diamond supplies?

c) **Long-term supply contracts** with prices periodically renegotiated between buyers and sellers, typically once a year.

A low value: weight ratio is found in international commodities where long-term physical contracts are the norm, such as iron ore and coal.

- d) **Futures exchanges** for non-ferrous metals such as copper, aluminium and tin, as well as (in the United States) precious metals such as gold and silver.
 - Technical factors are among the considerations here, namely the need in futures trading for a standard definition of the product; this is available in metals and oil, as well as robusta coffee (in London) and arabica coffee (in New York) but not, for example, in the more variegated product of the tea market.
- e) **Spot traders' markets**, with price assessments quoted in trade journals typically for the smaller markets;⁵⁵

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⁵⁴ For the case of aluminium, see Lines (1989), especially pp. 166-67.

⁵⁵ For a period, part of my job was to make these assessments for the markets in "minor" metals such as cobalt, cadmium and antimony as a journalist at *Metal Bulletin*.

f) **Daily price "fixes"**, in which a small group of brokers determine the price according to their judgment of the balance of supply and demand (the London Fixes for the precious metals, gold, silver, platinum and palladium).

This arises to a large degree from historical accident, following the evolution of trade over a long period in the City of London.

Other mechanisms exist for certain agricultural products, such as the **auctions**, held in exporting countries, which determine international prices for tea and tobacco.

This discussion of the commodity markets reflects the huge variety of structures which was also found on other types of market by those who have examined them in a similar way. In a study of the British consumer electronics market, Cawson concluded with this observation:

Similar studies of other industrial sectors suggest considerable differences in the way in which "sectoral governance" takes place, with differences in industry structure [in the conventional sense] (such as number and size of firms) providing only a partial explanation for these... Compared to the simple elegance of formal economic models, the political analysis of economic markets reveals a good deal of complexity and variety. The available tools for making sense of this are admittedly crude, and require refinement through extensive empirical research. ⁵⁶

In all these cases we find an emphasis on the complexity of the market structures and power relationships that are discovered, and a sense of the inadequacy of the conventional research tools and even the available conceptual frameworks. However, considerable strides forward have been made, at least in related fields which are particularly relevant to agricultural commodity markets. The most important is the development of Global Value Chain (GVC) analysis. This examines the process of production and distribution step by step from the field or plantation to the retailer and the final consumer, enabling a complex picture to be built up of the participants at each stage and the share of the total value of the product which the chain provides them with. This can identify the points along the chain where pressures might best be applied to create a more equitable outcome than exists at present. GVC provides a useful framework for organising thinking about commodity market structures, especially where the markets are international.

A great deal of further research of this sort is required in order to build up an understanding of individual markets and their associated value chains. We need comparative research into the various market structures and pricing systems identified. This will then facilitate a first approach towards a typology of markets and methods of price formation upon them, as well as the kinds of political formation which they may reveal.

⁵⁶ Cawson (1993), p. 67.

V. MARKET FAILURE AND COMMODITIES

Money prices are the product of conflicts of interest and of compromises; they thus result from power constellations.

Max Weber, economist and sociologist, 1922⁵⁷

Both the state and the market are flawed social institutions.

Charles J. Whalen, institutional economist, 1996⁵⁸

In principle, one might expect "market failure" to be a fairly general and straightforward concept in economics. Markets have certain functions to perform; they tend to exhibit, as we have seen, a complex social organisation, and it is only to be expected that some markets should be able to perform those functions better than others, or to do so better at some times or in some circumstances than in others. And sometimes, like any other institution, they might fall down on the job completely – indeed, to fail.

A situation in which markets are considered not to have operated effectively is often held to require intervention by the state. A classic example would lie in Keynes' analysis of the 1930s Depression, and the extent to which he understood *laissez-faire* economics to have first precipitated the crash and then failed to provide the means to overcome it, as illustrated in this comment:

From the beginning of the 1930s, Keynes had been much concerned with the employment crisis, which had been deepening drastically in the United States and England... Keynes's advice was to make vigorous use of fiscal policy (government tax and expenditure policy) to supplement the market mechanism of the private sector, which, in Keynes's view, was failing to get at the employment problem.⁵⁹

In Keynes' view, a self-righting equilibrium on the markets (especially the financial markets) did not exist. Hence he advocated an active role for the state to stimulate demand in times of depression and to activate and even control investment. This concept of market failure was common currency during the 1950s and 1960s, when Keynesian ideas were at their most influential, but was attacked in the neo-classical counterrevolution of the 1970s and 1980s, when "government failure" was asserted also to exist and to be as big or a bigger problem than market failure. This was particularly influential in policy towards developing countries and it informed much of the thinking behind IMF programmes and structural adjustment in the wake of the International Debt Crisis. It still continues in the great emphasis placed on correct national "governance" and the eclipse in policy discussions of concerns with market failure in the sense just described.

Early in this paper we defined a market as a meeting point where goods or services are offered and acquired, their prices being able to fluctuate in such a way that the quantities supplied and de-

⁵⁷ Quoted in White (1993B), p. 5.

⁵⁸ In Foldvary (1996), p. 168.

⁵⁹ Ekelund and Hébert (1990), p. 516. This book's Chapter 19 (pp. 511-35) provides an excellent overview of Keynes' ideas and their place in the development of economic theory.

manded will match each other. However, we argued that there are several other mechanisms through which society can and does organise its economic affairs, and they also have their virtues. As with those mechanisms, it is entirely legitimate to ask whether any particular market, or category of markets, performs its functions adequately – and if not, why not. This is regularly required of other institutions, including the government itself in a democracy. If in any respects a market or group of markets is found wanting, it is equally reasonable to ask what remedies can be found – whether within the markets themselves, or by calling on some other institution to assume a responsibility.

The key test for any market will be how well the price system performs the task of mediating between supply and demand in the way we have described. There are two aspects of this, one of them strictly economic, the other related to political relationships within the market. The first is whether, over a period, the quantities supplied do equal the quantities demanded and whether, in achieving this goal, the price remains reasonably stable. The second, more political (and more subjective) question is whether all participants in the market are treated fairly and equally. One aspect of this is whether one group of participants (be they producers, consumers, traders or others) are able to enrich themselves unfairly or gain a greater share of income over time from the market's transactions – or whether other participants' incomes from it are stagnating or declining.

This may be best understood through the use of an example, and the commodities markets can well illustrate some of the criteria, if only because it will be seen that in many ways they do not perform their functions very well. The following discussion will address both of the questions posed in the previous paragraph with respect to the commodity markets. From the point of view of development, there are problems in the ways that commodity markets work which can exacerbate the poverty problems of those countries that rely on them most for their export revenues. Those problems fall under three headings:

- trends in commodity prices over a long period, relative to other products, with a particular view to the implications for development;
- the stability or volatility of commodity prices, and associated with it, the degree of efficiency with which they adapt on the supply and demand sides to price changes; and
- the share-out of value along the chain from primary producer to final consumer, and changes in it over time.

a) Price decline

It has long been argued that there is a tendency for commodity prices to decline in real terms - the socalled Prebisch-Singer hypothesis. This has been amply borne out over the last 20 years. As a longterm tendency maybe little can be done about it, but it was made far worse by the export-orientation policies of structural adjustment, which led to widespread oversupplies. For example, over the quarter century from 1977 to 2001, real international prices for coffee fell by 5.1 per cent per year, and for cocoa by 6.9 per cent.

b) Volatility

Prices can be unstable over the short term (let us say the crop year for agricultural commodities) and the long term (the length of the business cycle – around five to ten years). Commodity markets are notorious for such instability, but different means exist to tackle the two sorts.

c) Declining share of final market prices accruing to the producer

This is a worldwide problem on agricultural markets today. It is a relatively recent development, but it is the one where the question of market power arises most directly. For there is a massive concentration of the markets at key points on many agricultural supply chains - for example, at the points of grain trading, coffee roasting, and of supermarket retailing (for dairy products, fruit and vegetables). In coffee, the biggest of the roaster companies buys about 15m standard 60-kg bags of coffee beans every year, while the average farmer sells less than five bags. With such an imbalance in market power, it is little wonder that the roasters are making huge profits at the same time as many coffee farmers fall into destitution as a result of stagnant or falling prices.

The reasons for each of these problems of commodity price formation are detailed below.

a) Price decline

Four main reasons can be identified:

i. Oversupply: Many of the markets for tropical export commodities have faced chronic oversupplies over many years. Several explanations have been put forward. One of the most persistent is that overproduction for export markets has been encouraged by the 'export orientation' strategy advocated by the World Bank and other donors since the 1980s. In the early years of the Bank's structural adjustment policies, the danger was clearly foreseen – although few could have predicted quite how devastating it would be. It was argued that advice to one country to export more of a commodity, in order to earn more foreign exchange, could benefit that country without undue consequences; but if most of the countries exporting on the same market took the same advice, the total supply would increase, leading to a fall in prices in which all would be worse off. This became known as the 'fallacy of composition'. In market power terms, the consequence was a severe weakening of the position of export farmers on many markets that are crucial to developing countries.

According to UNCTAD, 'World Bank research has shown that this adding-up problem (or fallacy of composition) affects a number of agricultural commodities, notably bananas, co-coa, coffee, cotton, tea and tobacco... These commodities constituted 42 per cent of the total non-fuel primary commodity exports of LDCs in 1997-1999.'61 The volume of world coffee exports increased from 3.7m tons in 1980 to 5.9m tons in 2000 but their value declined from US\$12.5bn to US\$10.2bn. Likewise in cocoa: export volumes increased over the same period from 1.1m tons to 2.5m tons but, with persistent production surpluses, they fell in value from \$2.8bn to \$2.5bn.

ii. Corporate concentration: Buyer power has increased on agricultural supply chains, enabling supermarkets and others to force down their purchase prices, leaving any excess stocks to hang over at the producers' end of the chain. This has forced down prices at that end of the chain. For example, in recent years coffee prices at the internationally traded (green bean) and farmgate levels have remained low but the roasters have continued to make large profits. With their market power, the roasters (or in many other commodities, retailers) can force down their purchase price at the expense of farms, plantations and agricultural employees.

⁶⁰ Lines (2004), p. 16, based on Oxfam (2002), Figure 9, p. 25.

⁶¹ UNCTAD (2002), p. 162, which cites World Bank, *Global Economic Prospects and the Developing Countries* (1996), and M. Schiff, 'Commodity exports and the adding-up problem in LDCs: trade, investment and lending policy' in *World Development*, Vol. 23, No. 4 (1995).

⁶² UNCTAD (2003).

⁶³ See Oxfam International (2002), pp. 20-27.

The overriding need is to move economic power back in the supply chain towards the producers. The policy question is: what instruments can be used to achieve this?

iii. 'Singer-Prebisch' reasons: Hans Singer and Raúl Prebisch, two of the founding fathers of development economics, made their names with papers that observed and explained the same phenomenon. They sought to explain not only the volatility of commodity prices but the tendency which they observed for those prices to decline in the long term in relation to those of manufactured goods. A succinct, if rather technical, explanation of their shared case is made by Gibbon:

Prebisch (1950) and Singer (1950) argued that the decline in relative prices of commodities was structural, since demand for commodities was inelastic while demand for manufactures was elastic. Instability around a declining price curve was induced via the interaction of inelastic demand with a supply position that could be highly variable due to accidents of nature, as well as the tendency for price increases to generate overinvestment in producing countries.64

iv. Subsidies: On certain markets, declining prices are explained by the impact of subsidies to Northern farmers. This especially applies to so-called 'competitive' commodities, which are produced and exported by both developed and developing countries. It can affect products exported to developing countries, such as wheat and rice, which undercut domestic prices in the importing country, and products which are in competition with developing countries' exports. A special case of the latter lies in the high US and EU subsidies to their cotton farmers.

b) Volatility

Three main reasons can be identified:

- Seasonality and unpredictability of crops: Farmers throughout the world complain about the weather, and with good reason. Their output is subject to natural forces in a way that affects few other products. Good weather can improve a crop, both in yield and quality, while bad weather can destroy it. Agricultural production is also vulnerable to pests and diseases. None of these influences on supply can be predicted, and when they occur they can create sudden shortages or surpluses on the market, with inevitable effects on price. As we saw above, Singer and Prebisch argued that this supply feature was compounded by inelastic demand for these products – in other words, a failure of demand to alter very much in response to increases or decreases in price.
- ii. Long lead-times for supply responses: Both for tree crops (such as cocoa, coffee, rubber and tea) and many minerals, several years are required between the planting of trees or planning of mines and the first output from them. The size of the investment together with the time lag lead to an inflexibility in responding to either increases or decreases in demand. Supply therefore sticks when demand rises or falls, leading to sharp movements in price.
- iii. Speculation: People can make money out of buying and selling goods when prices are volatile, without having any physical use for the commodity. Futures exchanges in particular aim to attract speculative interest in order to provide liquidity and balance the 'hedging'

⁶⁴ Gibbon (2005), footnote 2 on p. 154, citing Prebisch, R., The Economic Development of Latin America and its Principal Problem (Santiago: UN Economic Commission for Latin America, 1950) and Singer, H., 'The Distribution of Gains between Investing and Borrowing Countries', American Economic Review, Vol. 40, pp. 473-85 (1950).

activities with which producers and users of the commodity use futures trades to protect themselves in the short term from adverse price trends. These markets further facilitate speculative business since the speculators only buy or sell a 'paper' contract and do not have to store the material themselves; nor are they required to put up more than a small share of the full price.

The effect of speculation on prices is not universally agreed. Some economists argue that it counterbalances physical demand and therefore evens out price fluctuations; but a common observation on the markets themselves is that speculators tend to 'ride' with price trends, and so make prices move *further* in either direction. A balance between these views was struck in one authoritative book: "On balance, there appears to be a consensus that in normal times, speculation stabilises the market, whereas in times of large shortages or surpluses, it tends to accentuate the instability of the market." However, since the biggest problems on commodity markets arise when there are large shortages or surpluses, this would suggest that the destabilising effects of speculation on prices are more serious overall than its stabilising effects. If MacBean and Nguyen are correct, speculation tends to exaggerate upward price "spikes" and downward troughs, which can lead to inappropriate investment decisions (which in turn tend to exaggerate fluctuations in future years) and especially sharp losses of income. Medium-term price fluctuations can be devastating for economic planning. A striking example was experienced in Ethiopia between 1998 and 2001. When coffee prices are good, Ethiopia gets about two-thirds of its export revenues from coffee, and 1998 was one such year; its coffee exports amounted to \$382m. Three years later they were just \$145m. How can a country with all Ethiopia's difficulties be expected to handle that sort of macroeconomic reverse?

Such price shocks can have severe micro-economic effects as well as macro-economic results. Oxfam in 2002 quoted an Ethiopian coffee farmer who described some of the things he could no longer afford because of what had happened to coffee prices - a "multiplier" effect in reverse. One consequence was a sharp fall in prices of the grain that he also produced, since coffee farmers and others who depended on them had been among the main customers for grain, but now they could not afford it and grew their own food.⁶⁷ This is another example of learning about the reality of large markets by disaggregating them and examining what happens at the local level.

c) Declining share of final market prices reaching the farmer

It is not only declining prices overall but the farmers' declining share of final retail prices which has led to crisis. Response on the demand side to price signals can be even slower than on the supply side, at least when those prices fall. This is the third price issue that needs to be addressed. It is the result of an imbalance in market power which arises from growing market concentration among the processors and distributors of agricultural commodities, be they grain-trading companies, dairies, coffee roasters or supermarkets.

We have already seen that between 1980 and 2000 the total value of coffee exports declined from US\$12.5bn to US\$10.2bn, in spite of an increase in volume from 3.7m to 5.9m tonnes. The International Coffee Organization (ICO) further points out:

In the early 1990s earnings by coffee producing countries (exports f.o.b.) were some US\$10-12 billion and the value of retail sales of coffee, largely in industrialised countries, about US\$30 bil-

⁶⁵ MacBean and Nguyen (1987), p. 132.

⁶⁶ stats.unctad.org/Handbook/TableViewer/tableView.aspx, sub-section 4.2.

⁶⁷ See Oxfam International (2002), p. 10.

lion. Now the value of retail sales exceeds US\$70 billion but coffee producing countries only receive US\$5.5 billion.65

Similar stories are told on many agricultural markets, and not only about tropical crops; a good example would be that of prices paid to British farmers by the supermarkets. On the coffee market this is easily explained. According to the International Trade Centre, competition in coffee "has shrunk to a point where in 2000 it is estimated that five leading green coffee trading companies accounted for over 40% of the total volume of green coffee imports worldwide." The degree of worldwide concentration in coffee roasting is similar. Following a wave of international mergers in the 1990s, the biggest roaster companies now buy about 15 million bags of 60 kgs each per year, while the average farmer has less than five bags to sell. This creates a colossal imbalance in market power. Surely all freemarket economists should be worried by it, since it seems bound to distort market prices and lead to allocative inefficiency.

A recent study examined the supply chains on six different markets and in each one it found similar "bottlenecks" in the linkage between farmers and consumers. For example, the supply of bananas to nearly 60 million people in the UK is provided by 2,500 plantations, 15,000 small-medium farmers and 400,000 plantation workers in the export sector. However, in the trade just five banana companies have more than 80 per cent of the global market, five companies or alliances have 88 per cent of the UK market for banana ripening and distribution, and five retailers command 70 per cent of the country's grocery market.⁷⁰

A further illustration appears on the British retail coffee market, one of the most highly concentrated with Nestlé enjoying a 51 per cent share. Between a cyclical peak in May 1997 and a trough in September 2001, international coffee prices fell from 180.44 US cents per pound to 41.17 c/lb (as measured by the ICO's composite indicator). At the next high point in February 2005 they reached 101.44 c/lb, some 44 per cent below the 1997 peak. The average British retail price meanwhile declined from 1,600.03 c/lb at its equivalent peak in November 1997 to a trough of 1,154.96 c/lb in February 2002. But at its next high point, in December 2004, it was at 1,530.94 c/lb - only 4.3 per cent below the 1997 peak.⁷¹ As a multiple of the international price, it rose from 8.9 times in 1997 to 15.1 times in 2004/5.

In the largest supermarket firms, central control of global supplies also seems to be on its way: Carrefour, France's largest chain, is reported to buy melons from just three growers in north-east Brazil to supply all its Brazilian stores and also ship to distribution centres in 21 countries. According to the FAO, 'In less than five years, Thailand's leading supermarket chain pared its list of vegetable suppliers from 250 down to just 10.' And again in Brazil, more than 75,000 dairy farmers were 'delisted' by the 12 largest milk processors between 1997 and 2001.⁷²

If supermarkets, agrofood processors and traders have benefited from the commodities crisis, were they also in some sense its cause? Or are they no more than agents of the crisis – in the right places at the right time, able to exploit the opportunities offered by market liberalisation, trade liberalisation and structural adjustment, but not the creators of those opportunities?

⁶⁸ Osorio (2002), p. 1.

⁶⁹ International Trade Centre (2002), p. 29.

⁷⁰ Vorley (2003), p. 51.

⁷¹ All the data was found on the ICO's website, www.ico.org, in the Statistics/Historical Data section. They are based on monthly average prices; the UK retail prices for 2006 are not yet shown.

⁷² All the information in the paragraph is from Food and Agriculture Organization (2004), p. 21.

In one sense this does not matter. What does matter is the *existence* of transnational corporation (TNC) buyer power on the supply chains, and it needs to be dealt with on account of its effects here and now, regardless of what it may or may not have led to previously. However, there are numerous signs that the TNCs' actions *have* prompted the crisis in tropical agricultural commodities – and therefore, if left untouched, will continue to do so.

Getting the prices wrong

Rural people in developing countries have been the butt of global economic reforms over the last 20 years: generally poor and politically weak, they have suffered while people in the rich world have prospered as never before. In the 1980s the World Bank adopted the slogan 'Get the prices right' for its policies of structural adjustment, but it appears that on the primary commodity markets, the prices went catastrophically wrong.

An important – if extreme - example is coffee, from which LDCs earned \$446m in export revenues in 2003. The fact that this was just 31 per cent of what they earned from the same crop in 1980 is serious enough. But if the prices of both coffee and their manufactured imports had remained at the level of those in 1980, and the LDCs had maintained the same share of world coffee exports as in that year, this author estimates that those 50 countries would have earned \$4,239 million from coffee in 2003. Their actual earnings of \$446m are just 10.5 per cent of that. So the problem is not just falling prices but a near-exclusion from what was until recently the most valuable tropical agricultural market of all. This should surely place in question the whole development strategy involved.

What we find here is a multi-layered case of market failure. Inherent features of commodity markets can prevent demand, supply and price signals from interacting with any degree of efficiency. Price volatility, time lags, deteriorating terms of trade and market concentrations create enormous inefficiencies; and for anyone who believes in market efficiency, it should surely be the duty of public policy to correct that.

Markets do not operate in a social or ethical void and in moral terms no price is either "right" or "wrong" in itself. One of the oldest questions in assessing development policies is: who gains, who loses? In answer to it, a price's degree of rightness will depend on whose interests it best serves. The critical question should not be "Are the prices right?" but "Who are they right for?" The right prices for development are surely those which will enable the poorest countries, and the poorest citizens within them, to clamber out of poverty and begin to catch up with their more fortunate peers. Seen in that light, commodity prices over the last 20 years have gone very badly *wrong*, and with them the prospects of millions of poor people who depend on them directly or indirectly for their livelihoods.

⁷³ The data in this paragraph is from stats.unctad.org/Handbook/TableViewer/tableView.aspx, section 4.2. The figures all apply to the 50 countries which are currently classed as LDCs, although only 24 were so in 1980.

VI. DEALING WITH COMMODITY MARKET FAILURES

As soon as we recognise that the market, by its very nature, is necessarily a scene of conflicting interests, every element in it (such as we saw above, the price of cocoa beans) becomes a moral and political problem.

Joan Robinson, Keynesian economist, 1979⁷⁴

There is strong pressure in development circles for the solution to any problem to be of a sort that will go "with the market". But markets, like economic processes of any sort, can only be means to development, not ends in themselves. Yet this approach even applies to the trade on markets, which have been known for decades to operate unsatisfactorily. Over the last 20 years or so, those markets have generally been liberalised, which has often led to new problems. Nowhere does this question arise more starkly than in the international trade in commodities. The previous section outlined the problem, in the wider context of market theory which we have discussed. This section will make some suggestions for international policies which would help to resolve the difficulties. These suggestions will broadly cover two areas which were discussed in the last section: the phenomenon of buyer power on global value chains, which has led farmers and agricultural workers to receive a diminishing proportion of the final prices of the products, which they grow and sell; and the possibility of managing supplies on international markets in order to overcome oversupplies and price volatility.

We shall then make some complementary proposals for national and regional policies to be pursued by developing countries, including in the area of South-South trade.

The most effective way to tackle buyer power would be with new elements of competition (or antitrust) policy, both globally and at other levels. There is growing interest in using competition rules to reduce concentrations of market power on commodity supply chains, and thereby reduce purchasers' bargaining power. Prices paid to farmers would then increase, boosting their negotiating strength and so giving them more say in how the supply chains operate.

There are three problems with existing competition policies:

- a) They are mostly national or (in the EU's case) regional, but the markets are global. Only global policies and institutions will have the scope and power to deal with global concentrations of economic power. This should overcome developing countries' fears of international competition rules (one of the "Singapore issues" repeatedly rejected by them at the WTO), as the developed countries' proposals mostly sought requirements for *national* competition policies. In developing countries, these could be a mechanism to ease the entry of TNCs into domestic markets, and so undermine domestic firms, but global competition policy would tackle the TNCs' market power at source.
- b) Competition policies were developed in earlier periods when the main danger lay on the production side, and so are designed to deal with monopolies and oligopolies which damage consumers' interests, rather than buyer power which harms the producers. Not only are the technical issues different, but this is politically complicated as consumers (and therefore voters) in developed countries benefit from the low prices and assured supplies which buyer power achieves.

⁷⁴ Robinson (1979B), p. 164.

c) Many competition authorities investigate only whether dominant companies compete among themselves, rather than whether their combined power is an obstacle for smaller companies alongside them or upstream of them on the supply chain. For example, when the UK's Competition Commission investigated that country's supermarkets in 2000, it published numerous examples of abusive arrangements with suppliers but gave the supermarkets a clean bill of health because there was no evidence of collusion between them.

Other measures have also been proposed to create a better balance of market power on commodity supply chains. Three of them are:

- A legal maximum market share above which companies cannot go. The details remain to be determined: what the maximum should be, whether it should apply to a single company's market share or that of a dominant group, how to define the market by geography or type of product, how to calculate when a company or companies have reached that point, and what to do then. These can all be determined if the principle persuades enough people of its mer-
- A readiness to break up corporations where the needs of competition require it (as Standard Oil in the United States was broken up long ago, and as was under serious discussion in the same country regarding Microsoft in the late 1990s). However, this and the previous proposal could prove controversial even among opponents of buyer power, on the grounds that the critical problem is not market concentration in itself but the abuse of a dominant market position.
- Stricter regulations governing purchases by supermarkets. Any serious abuses committed by them on suppliers in developing countries should be fully covered by rules against restrictive practices under competition laws.

Clearly, we are a long way from any of this at the moment. At times, the developed countries' governments can appear to be egging on the process of buyer power – or at best, accepting it as a reality without thinking about its consequences. For example, the British High Commission in New Delhi was recently reported to have assisted the Tesco supermarket chain in its lobbying of the Indian government for entry into that country's retail markets.

Besides buyer power, the problems of price volatility and declining real prices for commodities should be addressed by supply management, wherever possible. Work along these lines was proposed in the African Group's proposal to the WTO in June 2006 on Modalities for Negotiations on Agricultural Commodity Issues, which should be followed up, irrespective of the future of the WTO's Doha Round negotiations.⁷⁶ The prices on world markets for agricultural commodities need to be stabilised and increased. Innovative methods of supply management should be urgently investigated market by market, in order to determine their potential to achieve this. The process is not easy, but it has worked successfully over long periods in various forms on many markets: for example, in the tea market from 1933-55 and in coffee from 1964-89. Wherever it is found to be feasible, international supply management should be introduced, supported by sufficient finance from the international financial institutions and other donors to ensure its success.

There should also be a review of aid projects and other instruments that contribute to oversupplies of commodities, for example when they boost yields or rehabilitate export crops which are already in market balance or surplus on world markets.

⁷⁵ Harrison (2005).

⁷⁶ World Trade Organization (2006).

Supply management involves any concerted technique which takes supplies off a market, or puts them back on it, in order to influence price movements. It can take many forms, and the right form for any market can only be discovered with reference to that market, bearing in mind the complexity and variety of market structures that we have discussed. Forms of supply management include De Beers' monopoly control over diamond distribution and OPEC's operations on the oil market, as well as the international commodity agreements (ICAs) between producer and consumer countries before about 1990. Other examples were the control of supplies and stocks by the TNCs, which dominated the aluminium and nickel markets until the 1980s. Supply management in aluminium was spectacularly successful for the first 90 years during which that metal was traded.

Those examples all worked quite differently from each other: that is no accident, as every commodity market is different. The UN-sponsored ICAs between the 1950s and the 1980s were unusual in that they were based on cooperation between the consumer and producer sides of the market; most supply management is conducted by powerful players at some particular point along the supply chain, be they producers in cases like OPEC, De Beers and the aluminium corporations, or operators at the buyers' end of modern supply chains, for example the coffee-roasting companies and the supermarkets with their systems of supply chain management. The ICAs also followed a one-size-fits-all policy, requiring negotiation between the principal countries on both sides of the market and operating either through export quotas or through buffer stocks. OPEC does not work like that - it has never even included all the leading oil exporters - and yet it has shown marked success on its own terms over the years.

So what are the criteria for success? First, let us get the technical problems out of the way. The ICAs mostly operated by intervening on the market to keep prices within a predetermined price band, considered to be the trend price for the commodity in question. That requires a degree of foresight about markets in which the very problem being addressed is their instability. More ad hoc arrangements, assessing the state of prices from time to time without rigid rules, may be better. That is how OPEC does it.

The second issue is whether the aim is to stabilise prices or push them up. UNCTAD's ambition in the 1970s was to achieve stable commodity prices and "just and remunerative pricing, taking into account world inflation". The ICA which was most praised at the time, the tin agreement, appeared to be achieving both - until it collapsed in 1985, because it had taken so much metal off the market to keep the price up that the buffer stock ran out of money. ⁷⁸ Any supply management system has to decide at the outset which of the two options it wants to achieve; it is unlikely to manage both. And limits on actual production should be used wherever possible; that appears to be another reason for OPEC's relative success - admittedly on a market in which supplies can literally be turned on and off, unlike most commodities.

However, the problems are just as often political and they should be addressed squarely as such. This requires a full understanding in each case of the market politics and market structures involved (as defined in this paper). One of the conditions of success is the existence of a dedicated core of countries which feel solidarity with each other on other grounds, for example if they are neighbours or share a national language. This applies to the Middle Eastern countries in OPEC and it was also true of Indonesia, Malaysia and Thailand in the Tin Agreement. Coffee proves more difficult because of the large number and diversity of the countries which export it, while an attempt by copper-producing developing countries to intervene in the market in the 1960s got almost nowhere because the countries concerned were too diverse. That suggests that supply management will not work on every market, and certainly not by the same means on each one.

⁷⁷ MacBean and Nguyen (1987), p. 181.

⁷⁸ An extended account of the tin crisis is given in Nguyen and MacBean (1987), pp. 196-99.

Developing countries' domestic and regional strategies

The first requirement is to establish strategies for trade overall and their commodity sectors in particular, and include those strategies in overarching policy documents such as the Poverty Reduction Strategy Papers (PRSPs).

With regard to mineral dependence, some countries have avoided the problems discussed earlier. The best-known case is Botswana, the most mineral-dependent country in the world. The Botswana government took these dangers into account in its planning for diamonds exploitation in the 1970s. The government taxed the industry according to its profitability, using the revenues to finance national development in other fields. Diamonds exploitation is less dependent on investment by TNCs than other mineral sectors; and the market has been subject to more than a century of commercial supply management, using stocks of the gem to ration supplies and so keep prices both stable and high. Botswana's case indicates that with careful management, the development of minerals can be used to sponsor a broad advance in national development.

For agricultural commodities, the following policies are proposed:

- Efforts should be supported to find effective replacements for some of the functions of the
 former marketing boards. This means fostering organisations that assist farmers with market intelligence, the development of cooperatives, extension advice, access to credit and
 physical inputs, and schemes to make the most of premium market niches. They should be
 farmer-based where possible, government-run where not. The relative resilience of the coffee sector in Colombia is partly due to the government's heavy investment in farmers' organisations.
- In particular, improved market information should be made available to farmers, including both market and agronomic information about actual and potential export products. This is made easier by modern communications such as mobile telephones, e-mail and the internet as well as the radio.
- Exports of staple foods and other crops should be boosted to other developing countries, including under regional preference arrangements, in order to increase incomes for small and semi-subsistence farmers and to reduce food vulnerability. This will reduce dependency on unreliable global export markets.
- Regional markets and financial institutions should be developed, based on these regional groupings, in order to promote economies of scale enabling developing countries to compete more easily.
- Regional, national and sub-national plans to develop infrastructure are needed to facilitate
 trade. Among other things, these plans should cover storage capacity, irrigation systems,
 drinking water, telecommunications services, and building and maintaining roads at all levels, from local to international. The multiplier effects are high and with this approach risks
 can be pooled.
- More research is required on non-traditional commodities and their implications in relation
 to countries' specific endowments and characteristics. However, great caution is required as
 the risks are high and the potential of non-traditional commodities has been overstated in recent years.

VII. A FOOTNOTE ON FURTHER RESEARCH

Perhaps it is time to take economists on at their own game: they have used a "choicetheoretic" framework derived from economics to analyse social and political processes; let us develop a "power-theoretic" framework derived from the study of politics to analyse economic processes.

Gordon White, political scientist, 1993⁷⁹

Economics is only an observational and interpretative science.

Joseph Schumpeter, economist of the Austrian school, 1943⁸⁰

This paper has argued that even under the restrictive theoretical conditions applied to the concept of the "perfect" market, the competitive market process has the mediation of conflicting power interests at its core. The implications of this, whether for economic theory, debates about the role of "politics" in the economy, or economic research, are vast and – to a considerable degree – at present unfathomable. But there is plenty of initial research to do, both on the development of a more realistic theory of markets which will incorporate the question of relative market power at its core, and on the approaches to take in order to overcome the problems faced by developing countries on international commodity markets. The suggestions made below merely sketch out some general ideas to which many more details will have to be added.

Regarding general market theory, we should take the lead from what several eminent economists have already said on the subject. The following four suggestions are made:

- A strong emphasis over the ensuing period on observing actual markets in operation, and identifying the various forces at work on them and how they operate and interact.
- Based on these observations, an attempt should be made to develop a typology of markets and market structures, and their relationship with methods of price formation.
- Detailed studies should be made of the forces which bear down on the supply-demand-price triad on specific markets, in order to gauge more precisely how market power is divided up and how it operates. A lead can be taken from numerous existing studies, several of them already mentioned in this report. A good framework in which to do this is value chain analysis. In this work, some ground will have to be given in the pretensions of economists to mathematical precision, since elements will be needed of the more judgment-based approach common to other social sciences, including political science.
- Extensive research is needed into aspects of market psychology not just for the benefit of marketing, as at present, but to deepen the understanding of market processes in general.

⁷⁹ White (1993A), p. 2.

⁸⁰ Schumpeter (1976), p. 107.

With regard to commodity markets, the following suggestions are made:

- Comparative research should be carried out into the various market structures and pricing systems that exist on international commodity markets, leading to a typology of those market structures and systems of price formation.
- The best international policies should be determined to tackle the unequal distribution of power along global commodity supply chains.
- A detailed investigation needs to be carried out market by market, into the technical, political and legal possibilities of international supply management by public authorities, especially on the agricultural export markets of greatest interest to the poorest developing countries.

APPENDIX

ECONOMICS, SOCIAL SCIENCE AND MARKET POWER

But let us be honest. How much more do we know about market processes than Adam Smith knew that is of practical relevance?

James Buchanan, public choice theorist (and Nobel Prize winner), 1980⁸¹

Markets can be thought of as complex political systems with their own specific distributions of power and diverse sets of power relations.

Gordon White, political scientist, 1993⁸²

Every branch of learning has its own accepted methods and its underlying conception of the subject under study. There can be vigorous debates about these matters, often leading to disputes, and there are dissenters who hold different views. But this truth applies to the social sciences as much as to the natural sciences and the humanities. However, between one social science and another there are sharp differences in both concept and method, and over recent times those gaps have, if anything, grown wider. This paper has discussed the basic understandings of markets and market processes within the discipline of economics, with a particular view to the primary commodity markets. To further this understanding it seems useful to explore where economics lies with respect to the other social sciences, as to its guiding theories, its methods of research and analysis, and the ways in which it is used by those who seek answers to practical questions.

Modern economics derives from the earlier discipline of political economy, the leading "classical" exponents of which included Adam Smith, David Ricardo, John Stuart Mill and Karl Marx. It was systematised to analyse economic processes in isolation from other social phenomena only in the late 19th century, forming the "neo-classical" paradigm which underpins nearly all present-day economics. Meanwhile, other disciplines emerged to examine other aspects of social life. For our purposes the ones that matter most are sociology, political science and social anthropology. Related to all of them are elements of historical study: political history (traditionally pre-eminent) and the newer fields of economic and social history, both of which developed rapidly in the 20th century.

Since the so-called neo-classical revolution, mainstream economics has attempted to abstract economic processes from other social processes around them, with the aim of analytical precision. It has developed a long way since the late 19th century pioneers such as Léon Walras and Vilfredo Pareto in continental Europe, and Stanley Jevons and Alfred Marshall in Great Britain. The need for close analysis has led to numerous sub-disciplines: a division between macro-economics (which deals with the economy as a whole) and micro-economics (which looks at more detailed aspects of the economy); and subject areas such as financial economics, trade theory, industrial economics, agricultural economics, public-sector economics and development economics.

⁸¹ Buchanan (1980), p. 14. In this influential paper Buchanan argued for extending economic "rent-seeking" analysis to the study of politics and society. In general Buchanan's writings on political economy are an attempt to extend the concepts and methods of neo-classical economics into other fields of social inquiry. Yet he seems to admit here that those concepts are inadequate for their own basic task.

⁸² White (1993A), p. 2.

Over the course of time, this has led to two important (but perhaps not entirely compatible) consequences for the relationship between economics and other social sciences. Firstly, the elaborate techniques of economics have been applied to non-economic fields, for example in "public choice theory" which has been used since the late 1950s to analyse competitive processes in democratic politics. Ben Fine goes so far as to call this extension of the discipline into other areas of study "economics imperialism, the colonization of the other social sciences by economics", and he argues that it has entered a second phase in recent years. This is based on new developments within economics which seek to explain "market imperfections" and their responses – which are outside the markets themselves, and outside economics, properly speaking.

On the other hand, as a second consequence, much of the teaching, which deals with economic issues for practical purposes, is based on multi-disciplinary approaches which only partly include economics. A salient example is the area of business or management studies, which uses branches of micro-economics (for example, financial and industrial economics) alongside elements of psychology, sociology and accountancy. Meanwhile, the subject of development studies (as distinct from "development economics") was actually founded by an economist (Dudley Seers) who was convinced that economics alone could not provide all the answers to development. He concluded it was essential to combine it with studies derived from political science, economic history and sociology in a bundle of development-related disciplines. The question of market power, and the strategies required to deal with it, is a factor in both of these departures from a "pure economics" model.

Three big differences in conception and methodology between economics and related social sciences (especially sociology and political science) are relevant to this paper:

a) Max Weber referred to his own field of inquiry as "empirical sociology". 85 In both sociology and political science, social or political processes are observed and then an attempt is made to explain them. There is an acceptance of the inevitable complexity of these processes. Conventional economics teaching, on the other hand, starts with a *theory* of supply and demand, then defines the theoretical concept of the "perfect market" and goes on from there. It is (perhaps unconsciously) the view of many economists that the task of economics is to work out these elaborate theories first ("a priori" in Latin) and only apply them to real world events later. As Seers put it:

Instead of building up propositions from detailed observation of scores of concrete cases, professional [economics] work goes mainly into the construction, largely a priori, of models which are provided, after their erection, with a very thin quantitative foundation..., if indeed any numbers are used at all... In all scientific subjects, progress has depended to a considerable extent on systematic and comparative research.⁸⁶

This is the difference between **inductive reasoning** (which builds "from detailed observation of ... concrete cases") and **deductive reasoning** (which proceeds through a series of logical steps, like economics).

Seers ended the same paper with a "modest but revolutionary slogan: Economics is the study of Economies." As a policy-oriented macro-economist, national economies were his main object of study. But, I would argue, markets are more central than economies, and one could equally well coin the slogan: Economics is the study of Markets. The empirical study of markets also appears to be lacking.

⁸³ A key work is Buchanan and Tullock (1962).

⁸⁴ Fine (2002), p. 2059.

⁸⁵ Weber (1968 and 1978), Vol. 1, p. 3. This is in the first paragraph of Weber's book, *Economy and Society*.

⁸⁶ Seers (1967), pp. 25-27. See also Kaldor (1978).

b) We have already mentioned the tendency in economics to abstract economic phenomena from wider social processes. Moreover, mainstream economic theory is based on what individuals do. Anything involving more than one person is an agglomeration of the individuals concerned, rather than having force as a social phenomenon. Fine refers to this as "methodological individualism" and comments:

Mainstream economics ... is silent over the social relations, structures, powers, conflicts and meanings that have traditionally been the preoccupation of the social sciences. This is especially important for development studies.⁸⁷

c) A presumption built into economic theory itself (and unquestioned in modern-day policymaking) is that market power can - or even should - effectively be ignored. Nearly all thinking in mainstream economics develops outwards from the concept of perfect competition, which is based on a particular set of assumptions. One of these is that there are so many participants on such a market, and each one is so small, that none is able to exert any effective power over the market: they all have to accept the prices that arise from the balance of supply and demand that is found. By extension, where market power is found to exist in a market, it is defined as a market imperfection. Although concepts of market power are introduced into more advanced economic theory at a later stage, they are considered as variations on the starting point which is taught in the very first lessons of economics.

Here is an example of a senior economist writing a standard textbook, who candidly admits how such theory fails to get a grip of the real world of market power:

The student with a Teutonic [sic] obsession for classifying things into neat categories can identify at least six main market structure types involving power on the buyer's side... Only for the first two cases, which are seldom encountered in a pure form in the real world, do we possess much in the way of formal economic theory.⁸⁸

When sociologists and political scientists examine a market, they make no such presuppositions. The political scientists' very subject is power and how it operates within society; and a political scientist's basic approach when addressing markets (like any other institution) will be to look for power relations within them, observe how they work and then seek to explain them. Sociologists meanwhile accept power as a fundamental part of social life and also include it in their analysis accordingly.

Some people have argued that the most useful analyses of markets have been made by others than economists. For example, Maureen Mackintosh in a book about the food economy:

Markets... have widely varying institutions and economic contexts, they operate on limited information, they involve and help to create a variety of social classes, power relations, and complex patterns of needs and responses... Much of the work of analysing these markets has been done by anthropologists and geographers – and by market traders and marketing consultants.⁸⁹

It is remarkably widely acknowledged that a fundamental weakness in economic theory lies in inattention to the operation of markets themselves, and how prices are formed on them, although one might think that this was the central question the discipline was meant to address. This has occasionally

⁸⁷ Fine (2002), p. 2066.

⁸⁸ Scherer (1980), p. 299 (emphasis added).

⁸⁹ Mackintosh (1990), p. 47 (emphasis in the original).

been acknowledged by an astonishing number and variety of leading economists themselves, as we have seen.

Fine is pessimistic about the chances of achieving substantial change in the outlook of economics from within the profession, which he sees as increasingly disciplined within a narrow range of accepted views:

Radical political economy has been considerably depleted and, even where it has not, the modeling and statistical techniques of the orthodoxy are increasingly imperative as a condition of entry to the profession, to the exclusion of almost all else... As the degree of mathematical and statistical sophistication has been ratcheted up, so existing professionals who do not conform have found themselves marginalized to a greater or lesser extent.⁹⁰

Fine describes modern economics as "a discipline that has effectively outlawed any dissent from within." This brings us up against the dilemma faced by anyone who wishes to bring economic theory closer to reality. It has been eloquently expressed as follows:

If we admit that the tools of neoclassical theory have been developed with the aid of radical simplification of the problem situation, then the questions that remain are whether these simplifications can be relaxed and what remains of neoclassical theory if they are. And, what I mean by remains is not simply that the formal language of neoclassical economics is retained, but that the theoretical propositions about the world are retained. That is precisely where the difficulty lies. The modern research strategy of information economics and/or New Keynesian economics is one which retains the formal language of neoclassical economics, but introduces selective realism into the analysis. 92

Is it enough for realism to be merely *selective*? The basic neo-classical propositions are so far removed from reality that surely they need to be replaced wholesale. However, unless we endorse the Marxist analysis instead, I readily admit that this would risk placing us in a theoretical void, where almost everything would have to be thought out again. Neo-classical theory has taken more than 100 years to develop, and in that time it has produced many branches as well as numerous insights into important economic questions. Many of these could and should be adapted to a new theoretical base, but a colossal effort would be required. So one can understand the temptation to respond with the proverb, "Better the devil we know than the devil we don't know."

Since 1980, the neo-classical view of economics has seemed to carry all before it, but at the same time it has been under steady fire from many sides. There is nothing new here. Indeed, it is remarkable how many leading economists at different times, and from how many theoretical schools, have admitted that economics has not even adequately explained the basic operations of the market and the price mechanism. Quotations from several of them are used as chapter epigrams in this paper.

Important challenges in the first half of the 20th century came in the macro-economic theories of J.M. Keynes⁹³ and the theory of imperfect competition, developed by Edward H. Chamberlin⁹⁴ as well

⁹⁰ Fine (2002), pp. 2063 and 2064.

⁹¹ Fine (2002), p. 2066.

⁹² Boettke (1996), p. 30 (emphasis in the original).

⁹³ Systematically related in Keynes (1936).

⁹⁴ See Chamberlin (1949).

as Robinson. Piero Sraffa⁹⁵ returned to a form of the labour theory of value (according to which the value of a product is based on the amount of labour time that goes into it) and explored the influence of market power on income distribution and inter-firm competition. In so doing, he led the way to Chamberlin's and Robinson's work. R.H. Coase, who pioneered the theory of the firm, was also a vocal critic of general equilibrium theory. Michal Kalecki shared with Keynes a concern with the business cycle, anticipating some of Keynes' *General Theory* in papers published in his native Polish in the early 1930s. More recently Douglass North has emphasised the importance of institutions in the understanding of markets, 98 while much other recent work has been done on market imperfections, particularly the question of unequal access to information.

The most famous exponent of this way of thinking as applied to development is Joseph Stiglitz, a former chief economist at the World Bank.⁹⁹ Stiglitz strongly criticises the policies which, under globalisation, have led to the economic stagnation of poor countries and wider income gaps between rich and poor people. Another critical economist is Steve Keen, a follower of Sraffa who considers that the linear methods of mathematics which form the basis of most econometrics are behind the times and modern complexity (or chaos) theory is better suited to many economic phenomena. 100 Stiglitz also criticises the modelling which lies behind much of the inappropriate advice given in recent years by the World Bank and the IMF, based as it generally is on standard neo-classical theory.

However, all of these approaches share more in common with the concepts and methods of neoclassical economics than they do with any of the other social sciences. Their revisionist theories are essentially modifications of the neo-classical system. Keynesianism rejects certain doctrines such as static equilibrium theory, but Keynes was a pupil at Cambridge of Alfred Marshall, the man who did more than anyone to establish a synthesis of neo-classical theory; 101 and it has been commented of Keynes that, in the same way as Chamberlin and the industrial organisation theorists, he "wanted both to rebel against the neoclassical tradition and to remain within it." Or alternatively: "Keynes adhered to the entirety of neoclassicism, both micro and macro – deviating with respect to only one assumption: that savings are a function of the rate of interest." 103

Fine has a comparable view of the "new" paradigms of economics advanced by North, Stiglitz and others:

Whatever its methodological deficiencies, mainstream economics has remained firmly committed to an unchanging method – one attached to methodological individualism of a special type, utility maximization, to equilibrium as an organizing concept, and to considerations of efficiency. 104

⁹⁷ See Kalecki (1972), which was first published in 1939.

⁹⁵ His most influential work was published in its final form much later: Sraffa (1960).

⁹⁶ See Coase (1990).

⁹⁸ See North (1990) for a general explanation of North's thinking.

⁹⁹ Among several important works by Stiglitz, see "An Agenda for the New Development Economics", a paper for the UNRISD meeting on "The Need to Rethink Development Economics", Cape Town, September 2001. His most widely read book is Stiglitz (2002), which was recently followed up by Stiglitz (2006).

¹⁰⁰ See Keen (2001).

¹⁰¹ See Dowd (2004), pp. 82 and 125.

¹⁰² Swedberg (1994), p. 261.

¹⁰³ Dowd (2004), pp. 127-28.

¹⁰⁴ Fine (2002), p. 2064.

North, for his part, wrote mainly about the institutions *surrounding* markets, not the market *as* an institution or set of institutions in itself. His aim was explicitly to improve neo-classical theory, not to supplant it: "I ... specify what changes must be made in neoclassical theory to incorporate institutional analysis into that theory." Stiglitz starts implicitly from the concept of the perfect market, in an:

attempt ... to develop a new framework ... which ... focuses on real stability and long-term sustainable, equitable growth... It emphasizes a balance between markets and government: market imperfections necessitate government interventions. 106

So despite his sharp criticisms of development policies which are derived from neo-classical economic theory, it appears that the intellectual framework which it provides is a very difficult one to set aside. At present, the most thoroughgoing alternative to mainstream economics is Marxism. Marx offers a comprehensive account of both the economy and society on a different theoretical basis, the labour theory of value. Marx's writings provide many invaluable insights into modern economic life, and not just that of 150 years ago when he lived. Some of these were drawn upon in this paper: for example, what he saw as the tendency under capitalism for capital to concentrate and companies to grow larger. However, in none of his writings did Marx analyse market processes in an orderly way. This is because, unlike most theorists since Adam Smith, he did not see the market as the central feature of the capitalist economy. Marx's primary interest was in the impact of an economic order (or "mode of production") on working people, and this led him to build his theory on the labour process, in which the capitalist extracts surplus value from his workers' labour.

Robinson suggested that the initial formulation of neo-classical theory in the late 19th century was at least partly intended to distract students from the uncomfortable questions that Marx had posed:

Marx turned Ricardo's theory of profits into the theory of exploitation. Labour produces value and the capitalist takes part of it. The neo-classical theory that came into fashion after about 1870 was, consciously or unconsciously, a reaction against Marx. 108

She maintained that the continued domination of equilibrium theories in academic teaching in her own day (especially at that time in the United States) performed a similar ideological function.

For broader purposes than those of Marx, a more explicit political analysis of market structures and processes does seem to be required. The start proposed in this paper arises from modest observations of international markets, and especially the commodity and financial markets which I have witnessed as a business journalist earlier in my working life. Whatever the merits or demerits of the ideas presented here, at least they derive from observation rather than starting as well as finishing in theoretical abstraction.

¹⁰⁵ North (1990), p. 107 (*ibid*.).

¹⁰⁶ Stiglitz and others (2006), p. ix (emphasis added).

¹⁰⁷ A digestible set of readings of Marx's ideas on economics may be found in Freedman (1961).

¹⁰⁸ Robinson (1979A), p. 33 (emphasis in the original).

¹⁰⁹ Having worked for *Metal Bulletin* magazine from 1978-81 and for the business news agencies Unicom News from 1981-82 and Reuters from 1982-85.

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