THE GLOBAL COMMODITY CHAIN (GCC) APPROACH AND THE ORGANISATIONAL TRANSFORMATION OF AGRICULTURE: A LOOK INTO THE INCREASING POWER OF RETAILERS AND BRANDED MERCHANDISERS

Jagjit Plahe

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Abstract

From the mid 1980’s there has been a strong research focus on the organisational transformation of global agriculture (Whatmore 2002, Friedland, 1991; Goodman and Watts 1997; McMichael, 1994, Gereffi and Korzeniewicz, 1994). The new research agenda moves beyond the farm gate by examining not only the capital accumulation within the agri-food sector but also the structural coordination of the sector. It focusses on the socio-economic links between three different sets of activities: food production at the farm level; upstream industries which provide science and technology products and services for food production; and downstream industries which are involved in processing, marketing and retailing (Whatmore, 2002, p. 58). As part of the new research agenda, the GCC approach emerged as an analytical framework in the 90s. It links macro and micro processes, and allows the study of the international production system in a way that has not been “easily handled by previous paradigms” which primarily assumed the processes “to be discretely contained within global, national and local units of analysis” (Gereffi et al, 1994, p. 2). GCC analysis explores how firms interact in global production processes, the governance structure that operates along commodity chains and how power is exercised by corporate agents - not just in terms of barriers to entry, but also in terms of organisational changes and supply chain management. This article addresses the theoretical and empirical implications arising from existing GCC studies in the agricultural sector specifically in terms of the governance of commodity chains.

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INTRODUCTION

Agriculture is being restructured around the world: the types of commodities produced, the way in which production is organised, and the livelihoods which it engenders are all changing. This transformation is often attributed to a process of globalisation. Yet while we may usefully speak of temporally and spatially unified tides which are global in their influence, this does not mean that all sectors, all places, and all people are riding the same wave of change (Raynolds, 1997, p. 119).

All firms and businesses in the food production system receive inputs and send outputs and in converting inputs to outputs, they are located in a commodity chain, or multiple chains (Hopkins and Wallerstein 1994, p. 17). The term global commodity chain (GCC) refers to the “network of labour and production processes whose end result is a finished commodity” (Hopkins and Wallerstein 1986, p. 159). In the past ten years, GCC studies have made an important contribution toward understanding the transformation of agricultural production systems. These studies explore how firms interact in global production processes and the governance structure that operates along chains.1

The article is divided into two sections. The first defines the GCC approach and outlines the concept of “governance” in commodity chains. The second section uses existing GCC case studies in agriculture to map major findings about the governance structures in commodity chains in recent research. This paper concludes that agents further downstream in commodity chains – which include branded merchandisers and retailing giants – are gaining an increasingly dominant position in global production processes.

GLOBAL COMMODITY CHAIN (GCC) APPROACH: AN INTRODUCTION TO THE THEORY

The GCC analytical framework which has its origins in world systems analysis (Wallerstein, 1974) emerged in the form of a book entitled “Commodity Chains and Global Capitalism” edited by Gereffi and Korzeniewicz (1994). They describe the GCC approach as consisting of “sets of interorganisational networks clustered around one commodity or product, linking households, enterprises and states to one another within the world economy” (Gereffi and Korzeniewicz, 1994, p. 2). Gereffi and Korzeniewicz contend that specific processes within a commodity chain are represented by nodes, which are linked together to form networks. Gereffi identified three dimensions of GCCs: an input-output structure, a territoriality (the dispersion of production and distribution activity, comprised by different enterprises) and a governance structure (which determines how different resources – financial, human etc – are allocated within the chain) (1994, pp. 96-97). The governance structure of chains has gained significant attention in recent years (Ponte 2001, 2002; Dolan et al 2000). The term governance points to how some lead firms determine and control the parameters under which others operate in a given chain (Humphrey and Schmitz, 2001, p. 2). Gereffi (1994, p. 97) outlined and analysed two different types of governance structures: producer driven and buyer driven:

Producer driven commodity chains refer to those industries in which transnational corporations (TNCs) or other large integrated industrial enterprises play the central role in controlling the production system (including backward and forward linkages) characterised by capital and technology intensive industries such as automobiles, computer, aircraft and electrical machinery.
Buyer driven commodity chains refer to those industries in which large retailers, brand-
named merchandisers, and trading companies play the pivotal role in setting up
decentralised production networks in a variety of exporting countries, typically located in the
Third World” (1994, p. 97, italics inserted).

GCC case studies reveal that in order to gain access to markets in developed countries, producers
and exporters from developing countries have to depend on lead firms in commodity chains. Lead
firms include not only manufacturers but also brand name companies and retailers (Gereffi, 1994;
Ponte, 2001, 2002; Dolan et al, 2000). One of the main differences between buyer driven and
producer driven commodity chains is that the former often do not own production facilities. Rather,
as key agents, they invest in design, marketing and sales (Gereffi, 1994, p. 99). Gereffi’s work on
governance issues in value chains and specifically on the issue of power is an important
contribution to GCC analysis. As Raikes et al argue (2000, p. 11), this contribution is significant
because power is not just viewed in terms of “barriers to entry” but also in terms of organisational
changes and effective supply chain management, which is implemented by key corporate agents.
Several governance case studies reveal the high level of pressure applied by lead firms on
producers in developing countries to adapt to new technologies, conform to high standards and
maintain extremely strict time lines (Dolan et al, 2000, Gereffi, 1995, Raynolds, 1994). GCC
analysis therefore challenges the assumption that “buyers and sellers in different markets meet
each other as independent agents, in which no single buyer or seller has a monopoly” (Kanji and
Barrientos, 2002, p. 19) and that a reduction in trade barriers will lead to more opportunities for all
potential buyers and sellers. Freer trade does not automatically lead to market access; often the
integration of producers and exporters in developing countries is carefully “managed” by lead firms
(Humphrey and Schmitz, 2001).2

While GCC analysis has its roots in dependency theory3, as Gibbon notes this is “more in terms of
questions posed than with respect to concepts or methodology”, (2001, p. 346). GCC analysis
breaks away from core/semi-periphery/ periphery division and therefore focuses on power not just
in terms of the ownership of productive resources, but also in terms of new forms of industrial
organisation and system coordination. The GCC framework focuses both on sectors as well as
regions, again a departure from dependency theory (Gibbon, 2001, p. 346). Also, given the focus
of the GCC approach on different nodes in a given chain, GCC analysis provides a framework for
developing quite targeted policies at the national level to assist vulnerable producers to upgrade, or
to increase their chances of being part of a given chain.

The GCC literature points to a new research agenda, one that examines the full range of activities
involved in bringing a product into the global market. It also focuses on other activities further
downstream such as advertising, marketing and retailing, and the final disposal (after use) of the
product. The GCC approach therefore provides both a micro as well as a macro picture of global
production processes. It questions why certain agents in a given chain are able to earn higher
profits by focussing not only on the value added dimension, but also on regulatory and
 technological factors, and the socio-economic relationship between different agents in a given
chain. In doing this, it also questions why producers from developing countries are placed where
they are in global production systems, and more importantly, what policy steps can be taken to
change this. The approach moves away from the neo-liberal assumptions of the “trickle down”
effect and from anthropological approaches, which often do not link the micro production
processes to overall global picture.

The GCC framework (developed by Gereffi et al, 1994) has mainly been applied to the
manufacturing sector and within this sector it has been more commonly applied to the export of
apparel from East Asia to the United States. GCC analysis has also been used by large non-
governmental organisations and activist groups in their advocacy work.4 While fewer studies exist
in the area of agriculture, several authors have used the GCC framework to examine the changes
Gibbon and Daviron 2002; Gibbon, 2002; Gwynne 1999; Barrientos et al 2002; and Dolan et al;
2000). GCC theory is still in its infancy and as it is further analysed and applied to a different range
of commodities, new theoretical perspectives are emerging. These include the implications of national and international regulations – including trade regulations - on the governance of chains; GCC analysis and upgrading primary production; the governance of GCCs and the role of government, international and private standards; GCC analysis and feminist research etc. A detailed examination of the emerging theoretical and empirical implications of the approach is beyond the scope of this paper. Instead, existing case studies in the area of agriculture are used to examine the major findings with regard to changes in the governance structures of both traditional and non-traditional commodity chains.

THE GOVERNANCE OF GCCS – AN EMPIRICAL PERSPECTIVE

The four existing case studies reviewed below were conducted by researchers from a number of institutions across the world. They represent the only major investigations into this field at the current time. All the studies used the GCC approach to examine changes in the global production process of a given commodity. The following section analyses the changes in the governance structures of the different chains, and identifies common themes.

GCC analysis and traditional export commodities in the agricultural sector: Key traditional developing country exports include coffee, cocoa, cotton, sugar, rubber and tobacco. Most of the GCC case studies generated in the area of traditional commodities focus on the implications of commodity market reform, which took place in the mid 80s and the 90s. As Ponte contents, commodity market reform has led to varied responses in developing countries depending upon the commodity in focus, the country under study and the nature of the domestic markets before reform (2002, p. 250). There are some parallels however, when it comes to the changes in the global coffee and cocoa marketing chains.

During the International Coffee Agreement (ICA) era each producer received an export quota and price was regulated through the tightening or relaxing of the quota system. Governments in producer countries were heavily involved in the supply process (Ponte, 2001, p. 11). Due to a number of complex reasons the ICA collapsed and following this coffee prices became volatile, and the distribution of profits along the chain became highly uneven. In the 70s and 80s, producers retained an income of approximately 20 percent, with the rest going to the agents in the consuming countries. However in the post ICA period in the 90s, the income to producers fell to 13 percent and the proportion retained in the consuming countries rose to almost 80 percent (Talbot, 1997, quoted in Ponte, 2001, pp. 14-15). The underlying reasons for this unequal distribution lie partially in the change in the governance structure of the chain.

During the ICA period, the governance of the coffee chain was characterised by a process which involved both producing and consuming countries coming together, holding discussions and signing an agreement. Producing countries were assured of a minimum price through the quota system. However the end of the ICA dramatically altered the balance of power in the coffee marketing chain. According to Ponte “from a fairly balanced contest between producers and consumers within the politics of the commodity agreement, market relations shifted to a dominance of consuming country-based operators... over farmers, local traders and producing country governments” (2001, p. 11). The liberalisation of agricultural markets in producing countries led to a decrease in government intervention in the export and marketing processes of coffee. As a result, many local exporters who did not join international traders could not compete in the market without the necessary financial support, and this led to a concentration in international traders (Ponte, 2001, p. 16). In 1998, just two corporations, Neumann and Volcafe, controlled almost 30 percent of the total coffee market share (Ponte, 2001, p. 16). However the greatest concentration in the buyer segment of the international coffee chain has been among the roaster. Two companies, Nestle and Phillip Morris, now control approximately half of the global market share for roasted and instant coffees (Ponte, 2002, p. 18). These corporations are less keen on vertical integration and more interested in controlling the chain through branding and marketing. They prefer to leave the supply of coffee to a variety of independent traders (Ponte, 2001, p. 18).
rely not only on traders for their supply, but also on exporters in producing countries. They therefore have successfully managed to control the risks in supply by reducing their dependence on any one single supplier. Roasters and traders are therefore not vertically aligned. Roasters wield immense power in the coffee market chain by operating a supplier-managed inventory where all risks associated with supply are outsourced to the trading house. This change in governance has strengthened the power of the roasters vis a vis all the other key agents in the chain: the farmers, local exporters, traders and retailers.

A similar trend has occurred in the global commodity chain of cocoa, the final product of which is chocolate. Prior to liberalisation of the market, the cocoa commodity chain was characterised by smallholder producers mainly in West Africa. Cocoa supply and quality was coordinated and controlled by the West African national governments. International cocoa trade was regulated through agreements between producing and consuming countries, and producers were assured of a fixed price. The International Cocoa Organisation (ICCO) was involved in price stabilisation through a quota system similar to the ICA system. Also in some countries surplus revenue went to a stabilisation fund, which covered losses when prices were low (Fold, 2001, p. 414). A slump in prices in the 1980s led to a situation where the ICCO could no longer hold extra stocks (Dand, 1999, quoted in Fold, 2001, p. 411). At the same time, the stabilisation funds set up in some countries such as Cote d’Ivoire could not guarantee fixed prices in West African countries. The producers where therefore very hard hit. National cocoa institutions were eventually deregulated under structural adjustment programs instituted by the Bretton Woods institutions, and in some countries like Nigeria, this took place virtually overnight (Fold, 2001, p. 415). Local producers were therefore no longer assured of a minimum fixed price.

Low global cocoa prices, the deregulation of national cocoa supply systems in West African nations and major changes in technology in developed countries gave more power to actors further downstream (grinders and chocolate manufacturers) who were able to establish a dominant position in the cocoa chain.

Over the past fifteen years there has been a dramatic shift in the governance of the global commodity chain of cocoa. Fold contends that the most important phenomenon in the chain is the concentration in chocolate production, with only seventeen companies supplying fifty percent of the global market (2001, p. 408). While previously chocolate manufacturers were involved in grinding, competition amongst chocolate manufacturers forced many European manufacturers to outsource grinding and even intermediate chocolate manufacturing. Instead, chocolate producers are increasingly concentrating on branding and marketing activities (Fold, 2001, 408). The grinding industry on the other hand is dominated by three transnational corporations – Cargill, ADM and Barry Callebaut (Fold, 2001, p. 409).

Concentration has also taken place amongst international cocoa traders – brokers and dealers. Between 1970 and 1990 the number of brokers and dealers in the EU and the US fell from 192 to just 88 of which less than ten are considered to be international traders (Fold, 2001, p. 411). Also the commodity chain of cocoa has witnessed vertical integration between the grinders (who are also international traders) and the producers. According to Fold “most of the large grinding companies are also engaged in the international cocoa trade, sourcing beans directly from exporting countries, transferring in-house capacity from other commodity trading activities and exploiting economies of scale in transport, storage and processing” (2001, p. 418). A further study by Fold (2002) points to the fact to a power struggle between grinders and manufacturers. Grinders have been able to diversify their production to other cocoa products and therefore they are not as dependent on manufacturers. Also grinders have strong backward linkages in the chain and wield strong control over the supply of cocoa beans through their subsidiary companies in West Africa. Manufacturers therefore have to reply on a highly monopolised grinding sector to source the intermediate or in some cases the final product. Therefore, even at the buyer end, power is shared between different agents (Fold, p. 244).
The GCC and non-traditional export commodities in the agricultural sector: Traditional agricultural exports from developing countries have been undermined by international marketing constraints, poor terms of trade and increased global competition over the past 20 years (Raynolds, 1994, p. 143). This has resulted in the shift of exports from traditional agricultural commodities to non-traditional commodities in many countries, including horticultural crops and off season fresh fruits and vegetables (Raynolds, 1994, p. 143). Several authors have used the GCC framework to analyse the export growth in non-traditional agricultural commodities in developing countries. Strong gains have been made by some farmers and exporters in these countries in the past ten years. However, concentration in the buyer segment in several non-traditional agricultural commodity chains results in a pattern of unequal gains for certain key agents along the chains with weaker players losing out.

Retailing accounts for the largest proportion of fresh produce sales in developed countries and within this category, supermarket chains claim the largest market share (Goldfrank, 1994, p. 275). A major study by Dolan et al (1999) has made a significant contribution to GCC analysis in terms of agricultural buyer driven commodity chains. The authors analyse how UK supermarkets have affected the African fresh vegetable export industry in Kenya and Zimbabwe. In the United Kingdom, the “rise of supermarket chains has been one of the most dramatic examples of concentration in retailing” with the top four retailers accounting for approximately 75 per cent of all food sales which include fresh vegetables sales (Dolan et al, p. 6). Supermarkets now have their own brands and compete with other well-known brands such as Heinz and Kellogg. Similar to the branded merchandisers in the apparel chain in the United the States, the supermarkets in the United Kingdom “organise the supply chain” but do not engage in production. While previously fresh produce from Africa was mainly channelled through large wholesalers, now, given the concentration in the retailing sector in the United Kingdom, the supermarkets control 70-90 percent of all imports from Africa (Dolan et al, p. 7). Dolan et al argue that this concentration has led to a system whereby strategic decisions about the precise outputs of the chain, the required production standards and monitoring and evaluation of the performance of the chain are controlled by the supermarkets in the UK (pp. 18-21).

The Dolan et al (1999) case study on the horticultural industry in Kenya and Zimbabwe reveals that until 1992 production was carried out by small-scale farmers, and small and medium scale firms supplied the produce to wholesale markets in the United Kingdom who then channelled the produce to supermarkets. However, with the concentration in the retailing industry several changes took place in the supply chain. Firstly, many small-scale farmers were displaced, and replaced by “large scale production units”. As Dolan et al explain this is because the UK supermarkets endeavoured to attain the same production standards (quality, uniformity and packaging etc) from suppliers in Kenya and Zimbabwe as were required of their European suppliers (1999, p. 15). In order to Comply with the UK Food Safety Act, supermarkets created systems that allowed them to trace and monitor the products right from the farms to the shelves in the supermarkets (ibid, p. 12). This gave the supermarkets the power to determine which producers would be included or excluded from the chain. In most cases, it was mainly the big producers that could comply with the strict standards and produce the desired quality and quantity in the given time frames.

A study on Chilean fruit export industry reveals a similar concentration in the power of retailers. Export earnings from the production of six fresh fruits grew from US$150 million in 1977 to US$1.2 billion in 1996 (Gwynne, 1998, p. 213). It is estimated that 64 percent of the Chilean fruit is bought by the retail supermarket giants such as Sainsbury and Tesco that the United Kingdom and 34 percent that is channelled to wholesalers is bought by smaller retailers (Barrientos and Perrons, 1998, quoted in Gwynne, 1998, p. 216). Supermarket giants establish supply contracts with different players: multinational fruit companies, Chilean fruit companies, consortia of large farmers and between 200-250 small and medium scale export companies. The supermarkets therefore play a strong role in determining which producers are included or excluded from the chain.
THE EMERGING TREND TOWARD BUYER “DRIVEN-NESS”

GCC coffee and cocoa studies reveal that following the collapse of the international commodity agreements which had previously regulated global markets, led to a trend of increased “buyer driven-ness”, with international traders, branded merchandisers and retailers emerging as powerful agents within the given chains (Daviron and Gibbon, 2002, p. 152). In both the cases of coffee and cocoa, product differentiation has shifted from the producer segment to the buyer segment (Daviron and Gibbon, 2002, p. 153). Daviron and Gibbon argue that “buyer driven-ness to a large extent revolves around a divorce between differentiation with respect to consumer products and homogenisation with respect to the nature of raw materials on which these products are based” (2002, p. 153). Fold’s paper demonstrates how changes in technology and the changes in the European chocolate industry have diminished the demand for high quality cocoa beans (2001, p. 416). With the use of new technology, processors are now able to grind cocoa beans before roasting them, therefore totally eliminating the risk of burning small beans, or under roasting the larger ones (Fold, 2001, p. 410). Changes downstream in the chain have had a significant impact on farmers upstream who can no longer expect high premiums for bean size, colour and flavour. The decline in the price of cocoa beans therefore cannot solely be attributed to an increase in supply over demand or poor terms of trade. Ponte draws similar parallels in the coffee industry where the roasters use lower grade coffee for their blends and therefore have moved away from quality and locality and concentrated more on branding, packaging and homogenised blends (2001, p. 20). However in both the case studies there were some exceptions. Ponte’s study reveals a breakaway trend from the buyer driven coffee chain to more balanced speciality coffee chains, which include organic and fair traded coffee. In these chains producers are more empowered vis a vis downstream agents in the chain. Similarly, Fold (2001) points to the fact that there still exists a demand for higher grade cocoa beans which are vital to the chocolate manufacturer Cadbury in order to maintain the taste of the chocolate and therefore producers can still expect a higher premium for their products. Overall however, the buyer-driven trend in both coffee and cocoa is quite dominant.

The fresh produce GCC studies concentrate on the dominance of retailing giants. Both Dolan et al and Gwynne reveal how the supermarkets are able to wield immense power over which producers are included or excluded from the chain. They also determine what technological upgrades producers have to undertake to be included in the chain. This points to the overall vulnerable position of producers in the fresh produce commodity chains. The African horticultural GCC case study (Dolan et al, 1999) is the first major study that has examined the implications of local regulations in consuming countries, on the producers in global commodity chains. Most of the other studies focus on changes in regulation/deregulation in the producing countries. The implications of regulations on commodity chains pose new policy questions, especially in light of the World Trade Organisation agreements.

CONCLUSION

GCC analysis helps to map global production systems from the household level through to the supermarket. Linking the micro to the macro, the approach allows an insight into how producers are linked into the global sourcing system. This paper outlines the GCC approach and argues that there has been a growing concentrating in the “buyer-segment” of both traditional and non-traditional global commodity chains. International traders, branded merchandisers and retailers have a dominant position in the global commodity chain of coffee, cocoa and horticultural products.5

GCC analysis poses important questions with regard to the global production system. These include where producers and exporters from developing countries are located in the global production system, the reasons why they occupy this position and what the implications of such positioning are. The framework also helps to analyse the governance and other implications of national and global regulations on a given chain.
In this context, any research into the factors shaping the livelihoods of agricultural producers (up to seventy percent in some developing countries) will need to investigate the role played by groups at the buyer end of the chain. The recent research suggests that issues as fundamental as inclusion or exclusion within the global production system can be determined by the actions of large retailers or branded merchandisers. Development and corporate social responsibility policy cannot afford to ignore the implications of the changes in the governance structure of global commodity chains.
REFERENCES


NOTES

1 While still in its infancy stage, the approach has attracted a lot of attention from different researchers and research institutions including the Industrial Performance Center at MIT; the Institute of Development Studies in Sussex; the Centre for Development Research in Copenhagen; and the School of Development Studies at the University of Natal.

2 The assumptions made in traditional economic theory have to an extent been modified in new trade theory to take account of imperfect competition and trade between firms. However as Raikes et al argue, in new trade theory the issues of market imperfections have not been incorporated in the overall framework and largely remain analysed in an isolated fashion (2000, p. 5).

3 According to dependency theory, Western capitalism relies on poor countries for raw materials, demand and investment opportunities. The world is thus divided into core and periphery spheres and the development of the core takes place at the expense of the periphery which remains undeveloped (Baran, 1957, Frank, 1969, Wallerstein, 1974). World Systems analysis developed initially by Wallerstein insists “on seeing all parts of the world-system as parts of a “world”, the parts being impossible to understand or to analyse separately” (1974 and 1997, p. 3). Wallerstein (1974) divides the world into the core and periphery where the core concentrates on higher-skill, capital-intensive production and is militarily strong, and the periphery constitutes low skilled labour intensive production and on the extraction of raw materials. The core has strong states, and the periphery weak ones and therefore the weak ones are not able to control the terms in which they engage with the world economy (quoted in Randall, 1998, p. 145). Apart from the core and the periphery, Wallerstein also introduces the semi-periphery areas which are less dependent on the core than are the periphery areas.

4 By highlighting the asymmetrical power relations in the coffee value chain, NGOs such as Oxfam for example have used GCC analysis in their global trade campaign to advocate for policies to protect poor farmers in Africa (Oxfam, 2002).

5 However in the case of cocoa, as demonstrated by Fold (2002) this power is shared by global processors of cocoa. His study captures the dynamics of power at the processing end of the chain.