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Global Private Regulation and Value-Chain Restructuring in Indonesian Smallholder Coffee Systems

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Summary. — Consumer concerns over the environmental and social conditions of coffee production have led to the proliferation of sustainability codes, certification schemes, and labeling claims in the sector. This paper addresses how the global private regulation of ethical and environmental standards is having several implications for value chain structures and institutions in the smallholder coffee systems of Indonesia. Global private regulation is driving structural changes in modes of farmer organization, trader–farmer relationships, and is resulting in the increased upstream penetration of multinational trading companies into coffee-producing areas across Indonesia. An unintended consequence of these changes in the future may be to increase transaction costs along the value chain and to exert an overall downward pressure on farm-gate prices. © 2008 Elsevier Ltd. All rights reserved.

Key words - coffee, global private regulation, value chains, Asia, Indonesia

1. INTRODUCTION

The rise of a widespread "sustainable" coffee agenda has followed the earlier, predominantly NGO-driven, certification of organic and fairtrade producers for niche markets. Increasingly, however, this sustainability agenda is being driven by corporate interests who, often in partnership with international NGOs, are eager to demonstrate their ethical credentials to discerning consumers. This corporate engagement has significantly broadened the producer base affected by ethical sourcing practices in the global coffee sector. There are, however, several implications for smallholder production systems and industry structures when powerful corporate actors begin to require certification, traceability, and adherence to foreign-authored compliance systems. Leading agri-food researchers, such as Harriet Friedmann, are now describing the convergence of environmental and social politics, and the retail-led reorganization of food supply chains in terms of an emergent "corporate-environmental food regime" (Friedmann, 2005). Elsewhere, in a similar fashion, Gereffi, Garcia-Johnsom, and Sasser (2001) speak in terms of the "NGO- industrial complex." This paper charts the local structural changes taking place in Indonesia as a result of an emergent regime of global private regulation in the coffee industry.

The global private regulation of "sustainability" requires the capacity to trace back the agricultural origins of coffee in developing countries. This process of enhanced product traceability is a prime driver in a series of changes to value chain structures in producing countries, of which little has hitherto been documented. Furthermore, the specific demands for compliance to, and verification of, corporate definitions of sustainable production are driving a new division of winners and losers in the global coffee economy. In many instances, existing institutional support structures at the local or national level are being challenged by a new regime of global corporate regulation. New sets of institutional arrangements are emerging in producing countries, such as Indonesia, which are better adapted to meeting the requirements of these privately regulated value chains.

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Over the past two decades, debates on the social and environmental ethicality of consumer products have certainly gained prominence within the global coffee industry. As described elsewhere (Neilson & Pritchard, 2007), the mechanics of corporate engagement with sustainable coffee agendas have occurred via three overlapping sets of processes: (i) adoption of NGO-certified fair-trade and ecologically sound coffees as specific "niche" product lines; (ii) the development of firm-specific corporate codes of conduct, and (iii) an agenda to work toward collective, industry-wide private standards. The latter two processes reflect more specifically the emergence of corporate-driven self regulation.

With origins in direct purchasing schemes, pioneered by organizations such as Oxfam in the 1970s, fair-trade and certified-organic coffee made inroads into the global market during the 1980s. The primary aim of these initiatives was for civil society organizations to establish alternative consumer spaces alongside the mainstream coffee market, offering a means of product differentiation for growers which could be translated into farm-gate price premiums. A vital catalyst for subsequent corporate engagement with "sustainable" coffee was growing public awareness of a global coffee crisis. Coffee prices crashed following the demise of an international export quota system in 1989 and then, following brief rises in 1994 and 1997, continued a downward spiral at the close of the century. By 2001, the industry was in serious crisis, with farmers in developing countries exposed to some of the lowest ever coffee prices. Correspondingly, research linking the intensification of coffee production in Latin America with habitat loss for migratory bird species in the United States (Rice & Ward, 1996) provided another impetus for growing consumer awareness of environmental conditions in coffee growing communities.

Inevitably, global coverage of the crisis and environmental degradation pulled fair-trade and ecologically sound coffees increasingly into the consumption mainstream. With the increased importance of the symbolic quality of coffee products (Daviron & Ponte, 2005), leading brands could not afford to be associated with allegations that they were perpetuating third-world poverty or contributing to serious environmental degradation. During the period 2001–03, the world's five leading branded coffee companies put forward corporate "Codes of Conduct" that provided broad-ranging guidelines for ethical corporate activity (Neilson & Pritchard, 2007). At the same time, major roasting firms began offering "alternative" third-party certified coffees amidst their product range, including such labels as organic, fair-trade, shade-grown and rainforest alliance. More recently, major branded coffee companies and retailers have authored their own traceability-driven verification systems of environmental and social compliance in coffee-producing communities. Leading initiatives toward corporate self regulation in the global coffee industry include EUREPGAP (and the closely associated Utz Kapeh program, established by Dutch retail giant Ahold, but now spun off as an independent NGO), the Common Code for the Coffee Community (4C), and Starbucks' Coffee and Farmer Equity (CAFE) Practices (refer to Appendix A for a background overview of the emergence of these systems).

Corporate self regulation in the coffee sector frequently enrolls NGO actors, as partners in determining and monitoring best practice, in an attempt to establish moral legitimacy in the market. These partnerships obfuscate the distinction between corporate self regulation and NGO alternative products, creating a new regime of global private regulation. And yet, corporate engagement with "sustainable" coffee departs significantly from earlier NGO-driven certification in that adherence is fast becoming a mandatory requirement for market access. The expanding influence and reach of "voluntary" codes of self regulation are primarily corporate responses to market-based incentives, based on growing concern over the need to protect a firm's "reputational capital" and "operating legitimacy" (Angel & Rock, 2005). These systems therefore have the potential to induce changes across a much broader producer base, including Indonesian smallholder systems where earlier forms of NGO-driven certification had, for the most part, had little impact.

There now exists widespread support for a business case in favor of corporate self regulation, built around an argument of enhanced shareholder value through effective risk management (refer to Brown & Fraser, 2006 for an overview of the Business Studies literature on this subject). There also appear to be considerable corporate benefits gained through pre-empting formal regulation and freeing business from government intervention (as suggested elsewhere by Gereffi *et al.* (2001) & O'Rourke (2006)). For multinational corporations with activities extending deep into developing countries, private regulation also provides a valuable defense against allegations of social and environmental neglect in regions of the world where the regulatory capacity of states can be limited.

The introduction of corporate self regulation to the global agri-food system has also drawn extensive criticism. Giovannucci and Ponte (2005) have questioned whether sustainability standards in the coffee sector are likely to benefit developing country actors due to insufficient transparency and clarity of the standards, the inadequate participation of producing country actors in standards setting procedures, and the inability to compensate growers for improving performance. Mutersbaugh (2005) has further argued that globalized standards squeeze out certified-organic and fair-trade production. The potential for product differentiation is greatly diminished, with little guarantee of price premiums in the long run (Muradian & Pelupessy, 2005; Neilson & Pritchard, 2007). Finally, Raynolds, Murray, and Heller (2007) suggest that the credibility of such schemes is fundamentally undercut by their self-interested industry ties.

In this paper, I focus on the implications for value chain structures within smallholder coffee systems across Indonesia arising from the imposition of externally authored environmental and social compliance systems. The paper is structured as follows. I start with a brief discussion on methodology and the key concepts of corporate self regulation, governance, and institutions used in this paper. This is followed by an overview of the Indonesian coffee industry, presenting its historical development, introducing key actors and institutions, and delineating existing industry structures. This baseline assessment then provides a platform for the subsequent analysis of value restructuring now occurring. Key findings from this analysis include: (i) the prioritization of idealized forms of farmer organization (such as cooperatives) over traditional market-based trade networks; (ii) consolidation among a limited number of exporting firms and the upstream penetration of multinational trading firms; and (iii) trends toward contract farming-style arrangements between multinational coffee companies and producers leading to "value chain enclosure" and "farmer capture."

2. CONCEPTS AND METHODS: GOVERNANCE AND INSTITUTIONS IN GLOBAL VALUE CHAINS

This research adopts a global value chain (GVC) approach. GVC analysis ¹ has been

widely adopted by researchers, industry, and development practitioners to understand the political economy of contemporary global production systems. While the GVC approach can be traced to the world systems research of Hopkins and Wallerstein (1977, 1986), it has more recently been used as a tool to analyze different aspects of chain coordination and governance (Gereffi, Humphrey, & Sturgeon, 2005; Ponte & Gibbon, 2005). The landmark edited volume by Gereffi and Korzeniewicz, 1994 identified three key dimensions of GVCs: (i) an input-output structure; (ii) territoriality; and (iii) governance structure. The first two dimensions are generally considered descriptive, and the latter more analytical. The Global Value Chain Initiative, a collaborative effort between Duke University, the Institute of Development Studies (IDS) at Sussex, and other interested researchers (http://www.globalvaluechains.org), is developing a central set of concepts and tools for conducting global value chain research. These have been borrowed in this study. In this article, the chief concern is with value chain governance and the ability of lead firms located in distant locations such as the United States and Europe to dictate production and trade conditions in rural Indonesia.

Humphrey and Schmitz (2004) define "governance" as the process of specifying, communicating, and enforcing compliance with key product and process parameters along the value chain. This definition emphasizes the ways in which lead firms, often multinational companies, set the parameters within which other actors elsewhere in the chain must operate (Humphrey, 2005). Along global coffee chains, Ponte (2002) has described how large branded roasting companies are at the forefront of dictating governance structures, coordinating modes of operation for international trading companies, producing-country governments, and producers, as well as, in many cases, retailers and consumers. Value chain governance, then, is evident within various Corporate Social Responsibility (CSR) initiatives. Indeed, echoing definitions of governance in GVC analysis, corporate self regulation is defined by Graham and Woods (2006, p. 869) as "attempts by corporations to establish rule-based constraints on behavior without the direct coercive intervention of states or other external actors." O'Rourke (2006, p. 899) goes further to argue that

"The most dynamic experiments in global governance are not about national regulatory policies, international trade agreements, or even international agency initiatives. Rather, a new class of governance institutions has emerged that involve private and non-governmental stakeholders in negotiating labor, health and safety, and environmental standards, monitoring compliance with these standards, and establishing mechanisms of certification and labeling that provide incentives for firms to meet these standards."

Traceability-driven CSR initiatives have clearly emerged as an important tool with which lead firms implement value chain governance. In this study, I also introduce an explicitly institutional perspective to value chain restructuring, where institutions refer to both the formal and informal rules that govern the passage of a commodity along the chain. The works of economists such as Ronald Coase, Oliver Williamson and Douglass North have emphasized the role of transaction costs and property rights in institutional analysis. North (1990, p. 3) identifies institutions as "the rules of the game in a society or, more formally, the humanly devised constraints that shape human interaction." In the study of global coffee value chains, the work of John Talbot (1997, 2002) has emphasized the role played by global institutions such as financial markets and intergovernmental regulatory bodies in determining governance patterns. In this article, shifting institutional arrangements or "rules of the game" in Indonesia, such as the informal institution of interlinked markets between grower and collector, are identified as responding to new forms of global value chain governance.

The GVC approach also has important methodological implications. With the concept of value chain governance as a central concern, it becomes necessary to follow the actors along a chain to assess the constraints on behavior and incentive structures affecting industry structures. While international coffee roasters are essentially driving governance along global coffee chains, primary research for this study was performed on the pre-export segment of the value chain. Over the period 2004-07, semi-structured interviews were held with 16 exporters (some of whom were also mill operators) located in the major ports of Medan, Bandar Lampung, Jakarta, Surabaya, and Makassar (Figure 1). These ports serve as critical nodes from where supply chains extend into the coffee-producing hinterland. Eight separate field visits (each of generally a two-week duration) were made to production centers in North Sumatra, Lampung, East Java, Bali, South Sulawesi, and Flores. Where possible,

interviews were conducted with regional coffee traders and mill operators supplying the interviewed exporters to allow triangulation and to follow through particular modes of value chain governance. Thirty-one regional traders/mill operators were interviewed across the producing regions.

At the local level, representatives of 10 coffee farmer organizations (either cooperatives or more informal farmer groups) were interviewed as well as numerous discussions held with individual farmers and local market traders. A number of individual farms were also visited during these visits, including in remote locations to avoid any bias of visiting only the most accessible farms. In almost all cases, the interviews and discussions were conducted in the Indonesian national language. A "snow-balling" methodology meant that informants were frequently identified through prior interviews with industry actors, and it is acknowledged that in some cases, this results in the researcher being directed toward suppliers and farmers who are able to convey a positive impression of the exporters supply chain (and its ethical credentials in particular). To avoid gaining a false impression of production systems through visiting only "show-case" farmer groups and cooperatives, an effort was made to also visit farmers and traders not recommended by exporters and government.

In accordance with the aim of assessing the local and national institutional framework of the coffee value chain, interviews were also held with government agencies (notably the Directorate General of Estate Crops and the Department of Trade), representatives of the leading industry association (the Association of Indonesian Coffee Exporters-AEKI), and with Non-Government Organizations (NGOs) active in the coffee chain. Six district offices of the Directorate General of Estate Crops (responsible for coffee farmer extension) and four provincial AEKI offices were visited across Indonesia. Much of the information regarding corporate codes of conduct and certified producers is available online at various websites.

3. THE INDONESIAN COFFEE INDUSTRY

(a) *Overview*

Coffee was first introduced to Java in 1699, with the Indonesian islands becoming the

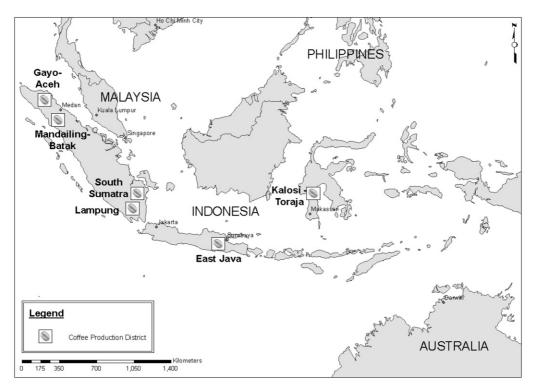


Figure 1. Major coffee-producing regions of Indonesia.

world's leading supplier in the 18th century (mainly through VOC-owned estates) before being surpassed by Brazil in the 19th century. Smallholder production of coffee expanded rapidly on colonial Java under the *culturstelsel* system of forced deliveries, starting in 1830 (Booth, 1988). Then, the Agrarian Law of 1870 opened up considerable areas of land for commodity production, resulting in the rise of a commercial plantation economy, and a number of coffee estates were established on both Java and Sumatra. Investment in coffee estates, however, was severely set back by the arrival into Indonesia of leaf rust during the 1880s, which subsequently decimated Arabica production, eventually leading to the widespread introduction of the disease-resistant Robusta species from around 1900. Robusta's introduction coincided with the rising dominance of smallholder coffee production in Indonesia, particularly in Sumatra, such that production by smallholders had already exceeded estates by the Indonesian proclamation of independence in 1945 (McStocker, 1987).

An important feature of smallholder treecrop expansion in the outer islands (as outlined in detail initially by Geertz, 1963 and then later by Barlow & Tomich, 1991) was how crops such as coffee were easily inserted into traditional shifting cultivation systems. The rapid growth in smallholder coffee production across Indonesia was due to an increase in the area under cultivation, rather than through improved management techniques or intensification. Ruf and Yoddang (2001) attributed the further expansion of coffee production by Sumatran smallholders in the 1950s to their access to forest lands, low overhead costs, and migration (bringing in labor mostly from Java). This growth of smallholder coffee production in the outer islands has continued since, and in many parts of Indonesia, coffee is still grown in pioneer fronts at the forest margin. Although the availability of forest land for conversion to coffee production outside protected areas is increasingly limited, an extensive "shifting cultivation" mentality still dominates cultivation in many areas. Intensification of production

through enhanced cultivation techniques is uncommon, and there have been few major breakthroughs in terms of improved plant varieties.

The great majority of Indonesian coffee production (around 90% by volume) is Robusta (Table 1). Southern Sumatra is the major producing region (Figure 1), where it is exclusively a smallholder crop (indeed, with the exception of an estimated 25,000 tonnes of estate production in East Java, almost all Indonesian coffee is now produced by smallholders). Panjang Port in Lampung is the key export node in southern Sumatra, and this Robusta coffee generally competes in the global market with producers such as Vietnam as a cheap, bulk coffee for processing into instant coffee and/or used as a filler in commercial blends. Since 1979, Nestlé Indonesia has operated an instant coffee factory in Lampung, and a number of international trading companies now have representatives there, including Ecom Agroindustrial (Switzerland), Olam (Singapore), Andhira (Netherlands), and Noble (Hong Kong).

There are also a number of important Arabica-producing origins in the country (Figure 1), many of which have well-developed reputations for quality in the international specialty coffee market. Despite constituting only 10% of production, Arabica accounted for 33% of national exports in terms of value in 2004 (AEKI, 2006). With approximately 35,000 tonnes of Arabica exported from Medan in 2004, northern Sumatra is the most important Arabica-producing

 Table 1. Estimates of Indonesian coffee production

 (tonnes)

Producing region	Robusta	Arabica
Southern Sumatra	320,000	1,000
Northern Sumatra	50,000	35,000
Java	60,000	5,000
Southern Sulawesi	3,000	7,000
Bali and Nusa Tenggara	12,000	4,000
Other	50,000	1,000
Total	495,000	53,000

Sources: This table is based on a number of sources, including data published by the Directorate General of Estate Crops in Jakarta (Dirjen Bina Produksi Perkebunan, 2004), the National Statistics Agency, (BPS, 2004), and the Association of Indonesian Coffee Exporters (AICE). Official data for smallholder production in Indonesia are notoriously unreliable, and the figures presented in this table have been adjusted based on field observations and interviews with various industry actors (notably exporters). region in the country. Here, there are two major production regions: the Gayo Highlands in Aceh Province and the Batak region around Lake Toba in North Sumatra Province. Customarily, all Arabica Coffee grown in northern Sumatra is exported under the trade name "Mandailing"² (sometimes written "Mandheling"). Southern Sulawesi (usually marketed as "Kalosi" or "Toraja" coffee) is the next most important Arabica origin in Indonesia, followed (in terms of value) by the highly regarded government estates of East Java.

It is generally the case that specialty markets, where origins are far more "knowable" to consumers and where symbolic value is more important (Daviron & Ponte, 2005), are more conducive to the value-adding processes associated with product certification. Specialty markets also demand greater corporate attention to reputation, brand management, and risk minimization. As a result, certification, traceability, and private regulation are generally far more advanced in the Arabica-producing regions of Indonesia than in the Robusta ones.

(b) Government policy, state institutions, and coffee development

The agricultural export economy, both the estate and smallholder sectors, stagnated during the immediate post-independence period due, in part, to a policy bias against exports by way of taxation. The nationalization of former Dutch-held estates in 1957 (described by Mackie, 1961) further contributed to industry decline. Very little official assistance was provided to coffee smallholders during this period. Timmer (1996) describes the political intervention in national food security across Indonesia starting in the late 1970s, which resulted in a relatively high annual agricultural GDP growth rate of 5.7% from 1978 to 1986 (Arifin, 2004). However, in contrast to persistent government efforts to introduce improved cultivation techniques in the case of rice production, coffee farmers did not have access to a credible government extension service during this period. While input subsidies under the food security policy (notably fertilizers) were sometimes transferred to the coffee sector, there were few coordinated efforts to develop coffee production systems by smallholders. Government support for Indonesian export agriculture has been largely restricted to palm oil and rubber, where "nucleus" estates were a key model applied to introduce new technologies to surrounding smallholders and to farmers within transmigration schemes. The expansion of agricultural export production, including coffee, in the late 1980s, was actually stimulated by a supportive macroeconomic environment, especially the competitive exchange rate following the 1986 devaluation of the Rupiah, rather than specific government policies.

During Suharto's military-backed "New Order" regime (1966–97), when strong anti-leftist sentiments pervaded all levels of Indonesian society, grass-root farmer organization was viewed with extreme suspicion by government authorities. On the surface, however, the New Order regime was committed to economic development built on a foundation of cooperatives (so-called *Panca Sila* principles). This contradiction meant that, despite official rhetoric, farmer groups were unable to evolve as meaningful economic actors and instead, farmer associations were commonly mobilized as political vehicles by the authorities. The village cooperatives (Koperasi Unit Desa-KUDs) and Agricultural Cooperatives (Koperasi Pertanian—Koptan) were such highly politicized organs, frequently acting as agents of government propaganda and locking up government vote banks during "mock" state elections. In post-Suharto Indonesia, these institutions have indelible associations of corruption and political misuse, and farmers remain cautious of organizing under the KUD structure.

Indonesia has had an unfortunate history of state intervention in agricultural supply chains, based largely on the mistaken premise that traditional trade networks were unnecessarily extended and inefficient. The establishment of state marketing boards and local trade monopolies was a common practice toward the latter half of the New Order regime. Coffee was never directly exposed to such intervention. However, the experience of citrus being forcibly channeled through KUDs in West Kalimantan, or tea factories being granted exclusive rights to areas of smallholder production in West Java, has left Indonesian farmers generally suspicious of any attempt at supply chain control (Montgomery et al., 2002). Interestingly, in the context of recent trends toward corporate self regulation in the coffee sector, the ostensible aim of Indonesian state intervention in the past was also to improve farmer welfare.

Government involvement in the coffee sector was limited to export allocations under the International Coffee Organization (ICO) regime prior to 1989. Export quotas were managed by the Association of Indonesian Coffee Exporters (*Asosiasi Eksportir Kopi Indonesia*— AEKI), creating substantial economic rents for those exporters with strong political connections. McStocker (1987) estimated that average exporter margins across Indonesia in 1983 (after taking into account costs) were a massive 22% of the FOB price, and that farmers were receiving only 60% of FOB. While AEKI no longer administers export quotas, it retains a government-mandated export levy which provides an income stream for the association which is subject to very little public financial accountability.

(c) Smallholders and traditional trade networks

By the turn of the 21st century, Indonesian coffee was overwhelmingly produced by scattered and unorganized smallholders with little access to improved technologies or an effective extension service, and selling into traditional trade networks. Across Indonesia, farm-level marketing of coffee generally involves maintaining relationships with first-stage collectors, who either purchase coffee at the farm-gate or through traditional village markets. Arabica coffee in northern Sumatra and southern Sulawesi is sold by farmers as semi-dried parchment coffee for subsequent processing at centralized mills. Especially in the Batak and Toraja cultures of these regions, traditional markets serve both economic and important social functions. In contrast to the trade in semidried Arabica parchment, Robusta coffee across Indonesia is dry-processed and hulled at the farm level, being sold into extended supply chains as Asalan (unsorted and ungraded) green beans.

It is not uncommon for coffee to change hands three or four times along traditional trade networks before reaching processing mills or exporters. The role of the first-stage collector in this network is particularly important, frequently offering a line of credit to farmers in return for the exclusive sale of harvested coffee to them, thereby interlinking product marketing and credit markets (as described elsewhere by Bardhan (1989) & Hoff & Stiglitz (1993)). Notwithstanding farmer allegations of profiteering and price fixing by collectors (a common, and often highly justified, claim against village money lenders and their ilk in various parts of the world), village collectors also perform an important value chain function connecting farmers to the mill. Elsewhere, McLeod

(1978) has emphasized the three principal services offered by such middlemen to farmers in Indonesia: product marketing, money lending, and merchandising (the latter usually involving the sale of rice, sugar, and other necessities). This widespread form of interlinked markets can sometimes result in reduced farm-gate prices and is often accused of contributing to the impoverishment of farmer communities. However, the lender is operating in a setting where formal credit is mostly unavailable. The lender, therefore, absorbs high costs due to monitoring and risk exposure. Without this village-level lender-collector, most Indonesian coffee farmers would not have access to any form of credit and would present serious marketing challenges to farmers.

Scholarship into the functioning of traditional Indonesian marketing chains has a long history. In her landmark study, Dewey (1962) emphasized the way peasant marketing was well adapted to the cultural characteristics of Javanese society, while Alexander (1987) conceptualized the traditional market as a structured flow of information. Elsewhere. traditional marketing chains for Indonesian cocoa have been congratulated for their efficiency and "almost perfect" competition, delivering high farm-gate prices (Ruf & Yoddang, 1998). The percentage of the FOB export price retained by cocoa farmers in Sulawesi has even been estimated to be as high as 90% (Akiyama & Nishio, 1997). Based on field observations in 2005 and 2006, it appears that farmer share of the FOB price for Indonesian coffee is slightly lower, ranging from about 65% (North Sumatra) to 70% (Sulawesi) for Arabica, and up to 75% for Robusta in Lampung (much higher, it should be noted, than estimates made by McStocker (1987), during a period of greater market intervention). The slightly lower rates for Arabica reflect the fact that Arabica leaves the farm as a semi-processed product, still with substantial downstream processing costs. In conclusion, then, it would appear that traditional coffee marketing networks do in fact function relatively efficiently, transferring most of the export price to farmers.

(d) "Sustainable" coffees in Indonesia

The first "certified" coffee in Indonesia (according to Mawardi, 2002) was an organic coffee from the Takengon region of Central Aceh, which in 1992 was marketed as *Gayo Mountain Organic Coffee*. This coffee was ini-

tially produced by a government-owned mill, which in 1997, was then purchased by a USbased coffee trading company (Holland Coffee). An associated farmers association supplies the mill, which has since obtained both Fair-trade and Utz Kapeh certification. The certified coffee industry in Aceh has recently become increasingly crowded. The US-based Fores-Trade has assisted another Acehnese farmers association (known as PPKGO) and local mill (CV. Trimaju) to produce Fair-trade and certified-organic coffee (ForesTrade, 2004). This was then followed in 2005 by a post-tsunami USAID project to establish another farmers cooperative and mill in Takengon, managed by the National Cooperative Business Association (NCBA), and focusing on producing certified coffee (USAID, 2007).

A parallel development to that in Central Aceh also took place in East Timor during the 1990s (when East Timor was still a province of Indonesia), where another USAID funded development program (managed also by NCBA) commenced in 1994 to establish coffee cooperatives and set up processing facilities to fully wash and process East Timorese coffee. According to Marsh (2001), by 1999, over 25% of the total crop of 8,000 tonnes was produced as certified-organic coffee by the 17,000-member "Cooperativa Café Timor." In both Aceh and East Timor, substantial donor supports or international cooperation has been critical to the development of farmer certification.

A second stage in the development of sustainable coffee in Indonesia commenced with the introduction of Utz Kapeh certification. In 2002, a state-owned plantation company, PTPN XII (an amalgam of former Dutch colonial estates across the Province of East Java) gained certification in response to requests from a particular buyer located in the Netherlands (Sukarno, 2006). PTPN XII now has Utz Kapeh certification for 10,000 ha of coffee (http:// www.utzkapeh.org). The company relied on considerable economies of scale and institutionalized in-house reporting frameworks to facilitate a relatively painless adoption of Utz Kapeh standards. The comparative ease of large plantation companies to gain Utz Kapeh certification vis-à-vis smallholders has reinforced the reputation of Utz Kapeh as being a corporatefriendly form of certification (Raynolds et al., 2007; Renard, 2005). Whereas the first stage, describe above, was driven by development agencies attempting to establish differentiated products, market premiums, and achieve certain

environmental targets, this second stage has been characterized by producers being enrolled within corporate-driven traceability systems as a requirement of market access. As of May 2, 2007, there were another five certified Utz Kapeh producers in Indonesia (http://www.utzkapeh.org), including one of the farmers association in Aceh, two certifications held by the local subsidiary of the Swiss-based Ecom Agro-industrial company, and another two held by Medan-based exporting firms.

Within the specialty Arabica-growing regions of Indonesia, a parallel set of value chain regulation has been unfolding. The rapid global expansion of the Starbucks Coffee Company, with its considerable buying power in these regions, is starting to dominate local trade systems, with the company's CAFE Practices program driving change in upstream producing regions. Starbucks currently offers two Indonesian coffees as single-origins within its regular product range: Sumatra and Sulawesi. By 2006, Starbucks' major suppliers in these regions were attempting to obtain third-party verification of producer conditions in accordance with CAFE Practices requirements. Less burdened by the sometimes cumbersome demands of industry-wide collaboration (such as the 4C described in Appendix A), CAFE Practices is currently exerting a greater influence on value chain structures in Indonesia than any other verification system. Based on interviews with industry actors, it is likely that the share of regional exports being sold to Starbucks suppliers in each of northern Sumatra and Sulawesi is now approaching 50%. This dominant market position has important ramifications for value chain regulation, as compliance with CAFE Practices is rapidly becoming a mandatory requirement of selling coffee from these regions.

Certified, and third-party verified, coffee systems across Indonesia have expanded over the last 10 years from an initial focus on organic and Fair-trade certification of smallholders, driven by international development agencies, to various modes of company-specific, and industry-wide, corporate self regulation.

4. GLOBAL PRIVATE REGULATION AND VALUE CHAIN RESTRUCTURING

The primary concern of this paper is to present value chain restructuring currently occurring in Indonesia in response to traceability demands and the increasing global private regulation of the coffee sector. Three manifestations of industry restructuring are documented and discussed in this study: (i) the prioritization of farmer cooperatives over traditional trade networks; (ii) exporter consolidation and upstream involvement of international traders; and (iii) the "capture" of farmers within enclosed value chains.

(a) Prioritization of farmer cooperatives over traditional trade structures

As noted in the previous discussion, the experience of Indonesian farmers with agricultural cooperatives in the past has been particularly adverse. Nevertheless, some coffee farmer cooperatives have been established, notably in the Gayo lands of Aceh, primarily as a means for attaining organic and Fair-trade certification. For Fair-trade certification, small farmers are explicitly required to form cooperatives, or another equivalent organizational form. For all practical purposes, organic certification for smallholders also requires group formation to facilitate inspection and monitoring, as increasingly do the various corporate codes that have emerged in the coffee sector. An implicit assumption within these systems, then, is that farmer cooperatives are an intrinsically superior mode of value chain organization and are to be prioritized over the traditional trade structures described in Section Section 3(c).

Effective farmer organization through cooperatives certainly appears to offer numerous potential advantages to growers (collective marketing, labor sharing, revolving credit, bulk-buying, and knowledge dissemination). This form of organization, however, is far from widespread in the coffee regions of Indonesia and it is contentious whether cooperatives are necessarily most effective in delivering services to individual coffee growers (particularly without substantial external support). The Acehnese experience of cooperative development has been driven by a history of development assistance. In many other producing regions of Indonesia, less affected by the activities of either international agencies or government departments, coffee farmers continue to be reluctant to voluntarily establish or join cooperatives. Cooperatives have been unable to secure farmer support in Indonesia due to their inability to provide the same services as traditional market mechanisms, such as hassle-free access to credit and simple marketing

procedures embedded within traditional market cycles, and to the perceived high costs of dealing with (historically anyway) bureaucratic and corrupt cooperative structures.

In an attempt to adhere to CAFE Practices requirements, exporters in Sumatra and Sulawesi are intensifying their supply-chain relationships with growers. While CAFÉ Practices does not explicitly require farmers to be cooperatively organized, successfully adopting price transparency within traditional farmer-market systems (such as in the Toraja or Batak lands) is extremely difficult. Suharto-era KUD structures still exist (on paper anyway) in both Sumatra and Sulawesi, and these "paper" cooperatives have in some instance re-emerged as preferred partners for exporters seeking strengthened upstream linkages in accordance with CAFÉ Practices. Several growers interviewed during field visits expressed concerns over the potential for rent-seeking opportunism by KUD leaders as a result of their priority status within these re-regulated value chains.

In Sulawesi, a key supplier to Starbucks is a centralized mill located in the Toraja District, with a minority share held by a local cooperative (a KUD). While this particular KUD is (even on paper) not a cooperative of coffee farmers (but rather a town-based trading entity), it is clear that the mill has benefited from an association with a cooperative form or organization. In 2005, this same mill introduced principles of economic accountability and financial transparency along the Starbucks supply chain. Thirty local market traders were identified as preferred suppliers to the mill and were requested to maintain records and obtain signatures for all farm purchases. The competitive village-level buying environment has subsequently been affected as lucrative rents accrue for the preferred traders, through whom all supplies to the mill must now be channeled.

The issue of farmer organization within reregulated coffee chains across Indonesia presents an interesting dilemma. On the one hand, traditional trade structures are ill-suited to both traceability and price transparency, suggesting the potential benefits of cooperative-style producer organizations. In Indonesia, however, the KUD structure is severely affected by associations with Suharto-era misuse and continued inability to provide farmers with acceptable financial services. Global private regulation is therefore changing the relative transaction costs of local institutional arrangements, resulting in structural adjustments within the value chain, and potentially depressing farm-gate prices as a result.

While a direct relationship between farmer cooperatives and a mill would, in theory, encourage a greater degree of price transparency and traceability, this is only possible within a supporting institutional framework, which does not currently exist in the coffee regions of Indonesia. As such, there will be serious social ramifications of externally insisting on changes to the local supply chain structure without first addressing the economic functions being performed by particular local-level institutions. If cooperative structures are deemed to be the preferred mode of farmer organization, a critical issue then becomes who should absorb the necessary costs of farmer organization. Should this be government, trading companies, international roasters, or international development agencies? Recent trends in Indonesia are for development agencies, such as USAID and the International Finance Corporation (IFC), to absorb these costs. The appropriateness, therefore, of promoting producer cooperatives as an idealized form of farmer organization to meet increasing traceability requirements under a regime of global private regulation should be seriously questioned in the Indonesian context.

(b) Exporter consolidation and upstream integration

Starting in 1986, and continuing throughout the 1990s, successive reforms to foreign investment restrictions in Indonesia have gradually opened up the trade in agricultural commodities to international trading companies. These companies are now playing a highly influential role in the coffee export sub-sector, with domestic traders complaining about their own increasing marginalization due to unfair competition with "foreign capitalists." An AEKI spokesmen claimed that 70% of the country's coffee exports in 2001 were being controlled by foreign companies (The Jakarta Post, 11/ 09/2001). The demands of global private regulation and traceability are contributing to this continued consolidation of international trader interests within the export segment of the value chain.

Table 2 shows how exports of Arabica coffee from Sulawesi have become increasingly controlled by a limited number of international trading firms. Similarly, based on field interviews with industry stakeholders, it is estimated that three international trading companies are

Arabica industry				
Year	No. foreign exporters	Export share (%)		
1997	1	26		
2000	2	50		
2003	3	49		
2006	3	72		

 Table 2. Role of foreign exporters in the Sulawesi

 Arabica industry

Source: Data calculated based on information provided by the Office of the Department of Industry and Trade, Makassar.

now responsible for approximately 50% of exports in northern Sumatra, and five international companies in Lampung are responsible for approximately 30% of exports there. Commonly, other significant "local" exporters are actually those who have developed close working relationships (including technical or financial support) with foreign trading companies. The upstream penetration of international trading companies is particularly evident in the trade of specialty Arabica. With major roasting firms involved in marketing the intangible qualities of coffee origins and demanding supply chain verification systems, international trading companies have been pushed further upstream into the producing regions.

Under the CAFE Practices scheme (SCS, 2007, p. 2), "smallholders cannot individually apply to CAFE Practices but must be represented within a more vertically integrated entity, either as part of a Producer Support Organization or as part of the supply network for a centralized milling facility." This explicit requirement for vertical integration within smallholder production systems is certainly encouraging increased upstream engagement by exporters. Whereas Indonesian exporters based in major port cities would traditionally rely on loose relationships with regional traders from the coffee hinterland, exporters are now establishing operations which allow direct purchasing from farmers in the growing regions themselves.

International trading companies are evolving heightened expertise as supply chain managers, and can call on their global experience to implement standardized traceability systems across various source regions. In the Arabica regions of Sulawesi and northern Sumatra, international traders are scrambling to establish traceability systems in accordance with CAFÉ Practices requirements. In each case, two or three preferred suppliers to Starbucks are emerging as increasingly dominant players in local export markets. Trust is a key component in the relationship between roasters and their global suppliers, resulting in long-term relationships between exporters with multinational trading pedigrees and dominant global roasting firms, where relationships can be strengthened through cooperation across a number of global origins. Multinational trading companies are generally more able, and willing, to adhere to traceability requirements along their supply chain, and so enforce the governance regime set down by branded roasting companies. It is, however, extremely difficult to disassociate the precise role played by global private regulation in driving consolidation and upstream integration, from wider influences already contributing to the dominance of international trading companies in the export sector.

With global private regulation encompassing various aspects of crop management, trading companies are necessarily becoming involved in smallholder agricultural extension. The capacity of these companies to deliver effective agronomic advice is uncertain and suggests a sidelining of traditional state-led extension structures (which in the case of the Indonesia coffee sector, it must be acknowledged, have been mostly ineffectual). Clearly, however, there is a need to ensure that farmers are receiving appropriate technical advice within these re-regulated value chains, possibly through innovative public-private partnerships, and links with established national and international research networks.

The economic implications of exporter consolidation are unclear. There are, of course, those in Indonesia who feel that the sidelining of domestic exporters is in itself a negative development based on nationalist or possibly philosophical, beliefs. On the other hand, direct purchasing schemes by international trading companies could help achieve higher farm-gate prices. This, however, assumes that there are not corresponding downward pressures exerted on farmers due to an increased cost of implementing such schemes (including traceability costs and possibly expatriate salaries) and that consolidation does not result in a monopsonistic buying environment.

(c) "Contract farming" and enclosed value chains

There are substantial costs associated with the certification of smallholder production systems. These costs include the costs of upgrading

the system itself to meet new requirements (e.g., there may be costs to implement more environmentally friendly production methods), the costs of maintaining farm documentation, the costs of verification (auditor fees), and the indirect costs of facilitating farmer organizations, providing extension and possibly research to meet new standards (e.g., non-chemical pest management techniques). In some instances, these costs are being borne by exporting firms anxious to enhance the marketability of their coffee. (The role of international development agencies, often in partnership with trading companies, is an equally important source of financial support in the coffee regions of Indonesia.) The result is that exporting firms frequently hold certification rights and are keen to recover the costs incurred in gaining certification. Smallholder farmers, then, are enrolled within enclosed and sometimes exclusive supply chains through "contract farming" style arrangements with exporting firms.

All six registered producers of Utz Kapeh in (http://www.utzcertified.org, Indonesia accessed May 8, 2007) are exporters, and only one of these is a plantation company (PTPN XII). The other certified producers manage a smallholder supply chain and apparently bear the costs of farmer organization and certification. Moreover, the CAFE Practices explicit requirement that smallholders are enrolled within vertically integrated operations has led exporters across Indonesia to mark out territories of influence as they develop formalized relationships with specific sites of production. This development entails effective ownership of the supply chain, and foreshadows contract farming and claims of exclusive access to particular producer bases. A closely allied process is the formalization of supply chains through registered trademarks held by the trading companies, such as Gayo Mountain Coffee, Sumatra Tiger, Toarco Toraja, and Aceh Gold (all explicitly geographical designations). By branding their own supply chain and retaining ownership over certification schemes, exporters are able to control the construction of quality, and so benefit from any quality-related price premiums.

The influence of "enclosed" value chains is most evident in the Gayo highlands of Aceh. Here, the relationship between exporters and producers is increasingly akin to contract farming, where labor relationships, models of farmer organization, and environmental management can be regulated within the "contract" (usually an informal agreement). Plaques with the names of exporting firms are sometimes affixed to individual coffee trees in Aceh as a sign that a particular farm is part of a firm's exclusive supply base. Exporters are competing with each other to enforce "ownership" over their respective supply chains.

The enhanced importance of documentation, audit, and information exchange is certainly strengthening the "contract" between farmers and downstream processing and trade interests. The integration of smallholders within vertical supply chains may entail increased farmer access to information, knowledge, and possibly credit, thereby facilitating upgrading and quality improvement. The advent of informal and formal contract farming arrangements, however, also potentially threatens the competitive buying environment found in many informal trade networks across Indonesia.

5. CONCLUSIONS

This article has presented field observations of the local-level impacts and institutional changes occurring in the Indonesian coffee industry as a result of an increasing global trend toward private regulation and traceability. It is likely that global private regulation will continue to dominate global value chain dynamics and governance structures in the coffee industry in the coming years, particularly in the highly brand-oriented specialty sector. The findings presented here identify discrete manifestations of value chain restructuring and institutional change resulting from ethically based sourcing standards in the coffee-producing regions in Indonesia. The paper discusses their implications, and sometimes contradictions, thereby highlighting the complexities of applying global ethics locally.

The ability of lead actors to "govern" the value chain by specifying compliance requirements across rural Indonesia is changing the relative profitability of various institutional arrangements in the coffee regions of Indonesia. These demands are pivotally changing the incentive structures for various value chain participants, leading to changing business strategies and the emergence of new institutional forms. Certain organizations and actors are already emerging as key beneficiaries of these shifting "rules of the game," including producer cooperatives and multinational trading companies. This paper has highlighted the shifting institutional environment of coffee production and trade, where the increased costs of new arrangements may actually be exerting a downward pressure on farm-gate prices.

Other key issues remain unanswered. It is unclear as to who should bear the various costs of system upgrading, farmer organization, technology transfer, and traceability. Ownership of certification is emerging as a critical determinant of who benefits from product differentiation. An important distinction between earlier NGO and development agency-driven certification of coffee systems and the rising corporate self regulation in Indonesia is the availability of financial resources to provide development support to producer communities. Corporate self regulation imposes requirements without necessarily offering developmental support.

Finally, it is also reasonable to question the ultimate effectiveness of schemes, designed as tools of defensive brand management to deliver development benefits to disparate communities in the developing world. As suggested by O'Rourke (2006) non-state regulation risks effectively stifling the emergence of democratic regulation and bypassing local state structures

through the promotion of top-down (foreignauthored) governance structures. Writing on the shifting regimes of governance in the global coffee market, Petkova (2006) similarly emphasizes the weakened role of state-territorial regimes, and associated rise of value chain leaders in shaping development outcomes in producer communities. There is clearly the potential for global private regulation to undermine existing, place-bound institutional such elected structures. as governments, trade unions, and protected area management systems. These scaled implications of corporate self regulation may be forging a new set of global regulatory structures for addressing social development and environmental conservation along the floating axes of global value chains, rather than the fixed geographical domains of country-states and electoral divisions. Incorporating the varied roles played by place-based institutional environments within modes of global value chain regulation remains an ongoing challenge to the effectiveness of global CSR initiatives.

NOTES

1. Notwithstanding some essential differences between the use of terminologies such as "global commodity chain," "global value chain," "filieres," and "supply chain" (refer e.g., to Raikes, Jensen, & Ponte (2000) or Bair (2005) for further discussion), for the purposes of this paper, I use the term "global value chain" to refer to a commodity-specific approach to understanding the political economy of how the global coffee industry is organized. "Supply chain" is used when referring to the sourcing strategies of a particular company.

2. Confusingly perhaps, very little Arabica coffee is actually now grown in the Mandailing Natal District, which is located further south on the border with West

Sumatra Province. The widespread use of the "Mandailing" name appears to be due to the historical development of the industry and the once important role in production and trade played by the Mandailing region during the 19th century when Sumatran coffee was commonly exported from the West Coast. Notwithstanding the anachronistic use of the "Mandailing" identity today, local and international industry actors alike are reluctant to interfere in its usage due to both widespread consumer familiarity and the substantial difficulties to accurately verify local origins in Sumatra. Some roasters are, however, starting to specify "Linthong" or "Gayo" coffee as supply chain traceability, and knowledge of the origin, improves.

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APPENDIX A. THE RISE OF CORPORATE SELF REGULATION IN THE GLOBAL COFFEE SECTOR: UTZ KAPEH, 4C, AND CAFÉ PRACTICES

The first initiative for "ethical coffee" to be introduced through an inter-company collaborative model grew out of comparable initiatives in other food products orchestrated, in Europe,

by the Euro-Retailer Produce Working Group (EUREP). Formed in 1997 by a consortium of Europe's major supermarkets to primarily address issues of food quality and safety, EUR-EP protocols for Good Agricultural Practice (EUREP-GAP) have emerged to play powerful gatekeeper roles in the global agri-food economy. These protocols generally require suppliers to comply with documented traceability requirements to enable market access, and whose scope now also includes environment and labor issues. The initial application of the EUREP-GAP concept to the coffee sector occurred in conjunction with the Utz Kapeh Foundation (a Guatemala-based organization established by the Dutch supermarket chain, Ahold NV). Utz Kapeh certification protocols are now essentially identical to, and benchmarked against, the EUREP-GAP code for Green Coffee. Increasingly, coffee producers are finding that Utz Kapeh certification is becoming a mandatory requirement to sell to certain buyers, especially in the European market. Utz Kapeh-certified coffee is now purchased (to varying degrees) by major roasting companies such as UCC Ueshima and Sara Lee, and multinational traders such as Neumann Gruppe, Volcafe, and Ecom Agro Industrial. Utz Kapeh has further developed a reputation as being a corporate-friendly mode of certification which does not raise the bar too high for producers.

With increasing consumer confusion over the array of labeling claims in the coffee sector, the task of establishing an acceptable umbrella code for the entire industry commenced in earnest in 2004. A collaborative effort of the German Coffee Association (DKG) and the German Agency for International Development, Gesellschaft fur Technische Zusammenarbeit (GTZ), began bringing together producers, trade unions, NGOs, and coffee industry representatives to develop a "Common Code for the Coffee Community," widely known as "4C." The mission here was to obtain universal agreement, through broad multistakeholder participation, on the borderline between acceptable and unacceptable coffee production practices, and then support continual improvement in practices through the purchase of coffee from progressive farms. All mainstream coffee was to be included in the code, and the 4C project has now got the broad support of major roasting firms and global coffee traders, including Kraft, Nestle, Sara Lee, Tchibo, Neumann Gruppe, and Volcafe. In late 2006, however, 4C-certified coffee was not yet available in the market, due primarily to the rather cumbersome organizational structures of the 4C (inevitably associated, perhaps, with attempts to generate widespread stakeholder agreement). Indeed, ongoing objections to the scheme from a number of producing countries have been central to reformulating the way the code is to be implemented.

There is at least one major roasting company which is not part of the 4C initiative. The Starbucks Coffee Company has decided to "go it alone" with their own comprehensive set of firm-specific ethical procurement standards. In light of its flagship role in the specialty retailroaster market segment, and its embrace of "coffee narratives" as a marketing tool, Starbucks was an obvious target for civil society interests in the debate over ethical coffee. Images of anti-globalization protestors attacking Starbucks stores in Seattle, 1998, were especially painful for a company which prided itself on embracing progressive, new-age ethical values. In 2001, Starbucks initiated the "Preferred Supplier Scheme." This scheme was developed in conjunction with Conservation International, who had already put together their "Conservation Principles for Coffee Production" (with support from Rainforest Alliance, the Consumers Choice Council, and the Smithsonian Migratory Bird Center). After an initial two-year pilot stage (2001–03), the scheme evolved into the Coffee and Farmer Equity (CAFE) Practices in 2004.

Apparently following the example of Nike, who had established a point-based code of conduct on labor and environmental practices for its network of suppliers as early as 1992, Starbucks has also adopted a points system for environmental, social, and quality conditions, where high scoring suppliers will be rewarded with more lucrative contracts. In contrast to other company-specific codes of conduct in the coffee industry, CAFÉ Practices operates through third-party verifying agencies, who allocate a score to each supplier based on specific quality, social, and environmental criteria. Starbucks is moving toward ensuring that "preferred" status is a minimum pre-requirement for all its suppliers, thus institutionalizing these standards within the company's entire coffee purchasing regime.

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