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THE ROLES OF STANDARDIZATION, CERTIFICATION AND ASSURANCE SERVICES IN GLOBAL COMMERCE

Margaret Blair, Cynthia Williams & Li-Wen Lin*

I. INTRODUCTION

Two major problems that permeate complex modern production and distribution enterprises are coordination and enforcement. While mechanisms of coordination have been studied extensively in management science and organizational economics, issues raised by the second set of problems have been the focus of microeconomic theory, organizational economics, and law, especially property, contract and business entity law (e.g., North 1990). At least two major mechanisms of enforcement of business and commercial understandings and agreements - legal contracts, and the organization of activities within firms - have been studied at considerable length by scholars in the law and economics tradition (e.g., Coase 1937; Williamson 1975). More recently, a third cluster of mechanisms, including norms and reputation, have become an object of study by economists and legal scholars (Richman 2004; Bernstein 1996; Bernstein 1992; Bernstein 2001; Grief 1989).

Both organization within firms and organization by contract rely heavily on rule of law.

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Hence one might expect that they would be unavailable or ineffective for businesses operating in a global environment, especially in countries that do not have established rule of law and well-developed independent courts and legal systems. It might seem that the explosion in global communications capabilities in the last decade would counteract or offset that problem by making it easier for the third mechanism – norms and reputation - to serve as an effective way to enforce contracts and expectations in the absence of law. But while reputational enforcement mechanisms can be quite powerful in getting large, highly visible organizations to live up to contract requirements and social norms, the same communications capabilities that can make reputation important can also be used to publish misleading information, distort perceptions, free-ride on reputations of others, conceal norm violations, and generally introduce at least as much noise as useful information into the process of determining whether legitimate expectations have been met on all sides, and economic gains have been divided up accordingly.

In this article we discuss the role of a fourth enforcement mechanism that we claim is rapidly becoming extremely important in global business and trade. This is the use of third-party, non-governmental standard-setting, inspection, assurance and certification services. Not only has there been an explosion in recent years in demand for third-party assurance services, as we describe below, but also a proliferation of quantifiable standards and metrics by which such services can measure and report on performance by parties to actual and potential contracts. Many of these performance metrics define standards for acceptable social and environmental behavior, as well as for such things as quality control and on-time delivery, so that third-party assurance services also appear to exercise a regulatory function, importing and enforcing norms of acceptable conduct throughout lengthening supply chains.

Probably the most familiar and well-established type of third-party standard-setting and assurance service is the body of accounting rules as applied by external auditors, who examine financial statements and the processes by which they were generated, and opine on whether the statements were produced in accordance with generally accepted accounting principles and fairly present the underlying economic reality of the firm. There is evidence that “boards of state accountants” were used to verify state revenues and expenditures in ancient Athens, circa 500-300 B.C., for example (Costouros 1978). Financial institutions that invest in or insure business ventures have also long made use of other kinds of non-

financial measures and assurance services. As maritime commerce expanded centuries ago, for example, marine insurance companies in France, Britain, the Netherlands, and Italy hired inspectors to make sure that ships being used for international commerce were sea-worthy. Indeed, several of the global assurance organizations that today certify adherence to a wide range of product specifications, or to the effectiveness of specific quality or management systems within firms, initially began as maritime inspectors.¹

Our thesis in this paper is that a number of factors are coming together in the global business environment to cause the demand for management standards and third-party assurance services to explode. In fact, we speculate that the role played by standardization and third-party assurance is rapidly becoming so important that, in some parts of the world where rule of law is weak, business norms unreliable, and regulation of business practices erratic or non-existent, private sector players may be turning to third-party assurance services as the dominant mechanism for regulating business and enforcing contracts. We offer reasons for this development, evidence of its scope and scale, and then describe the phenomenon in more detail by examining two industries, food products and apparel, where the use of third-party standards and assurance services has expanded especially rapidly in the last decade.

We conclude with a discussion of the implications for the “make or buy” decision at the core of the theory of the firm (Coase 1937). In this section of the paper we argue that as quasi-regulatory standards are developed within various industries, and as performance to those standards can be systematically evaluated using third-party inspectors and certifiers, the costs of moving production outside of vertical firm hierarchies drop. We believe this may be an important factor in accelerating the shift to outsourcing that has been observed over the last two decades.

¹ See discussion of the origins of the assurance service business in maritime and customs inspection at Part 2.2 below.

II. THE THIRD PARTY STANDARD-SETTING AND ASSURANCE INDUSTRY.²

As mentioned above, one of the most familiar types of third-party standard-setting and assurance service is the external auditor. Independent external auditors have been critical to the development of liquid financial markets in which individuals have reasonable confidence that information provided by companies in which they invest is an accurate reflection of the condition of the underlying business.³

Financial institutions that invest in or insure business ventures have also long made use of other kinds of assurance services, including credit rating, title services, inspections for hazardous materials such as asbestos, and independent appraisals. But in recent years, the range of international trade matters that are the subject of standardization, inspection, verification, assurance, and certification has grown substantially.

A. THE IMPACT OF ISO

A major example and driver of the development of global standards has been the widespread development since the mid-20th century of international standards and technical specifications for a vast array of products and processes by the ISO. Since its founding in 1946, the International Organization for Standardization (ISO) has promulgated tens of thousands of technical standards.⁴ ISO also publishes a list of

² Parts 2 and 3 of this chapter are largely taken from Blair, Williams and Lin, 2007.

³ As an indication of the explosion in demand for audit services in developing countries as those countries begin to develop liquid financial markets, the Chinese market for accountants' services grew by 304.5% over the years from 1999 to 2003. The market is predicted to expand by 149% to \$4,022 million by 2008. Auditing took the largest share in China in 2003, accounting for 66.2 %. See <http://www.euromonitor.com/>.

⁴ "ISO", from the Greek word for "equal," was adopted as the "standardized" name for the organization whose English name is the International Organization for Standardization. ISO is a non-governmental organization whose member institutes are part of the governmental structure of their countries, or are mandated by their government. Typically, members have their roots in the private sector, having been set up by national partnerships of industry associations. ISO uses technical committees organized by subjects for standards development, and at this time has more than 200 such

accreditation bodies that, in turn, accredit hundreds of organizations around the world that are in the business of carrying out various evaluations to determine if products or processes or management systems are in conformance with the specifications in ISO standards.

Twenty years ago, in 1987, the ISO embarked on a significant new path when it adopted the “ISO 9000” standards of quality management.⁵ These were the first sets of international standards that applied to *management systems* that firms use to meet customer and regulatory requirements, rather than to the characteristics of the products firms produce or to units and methods of measuring those characteristics (Roht-Arriaza 1995). Since the ISO 9000 series of standards was adopted, many firms have chosen to have their systems independently audited and certified to them,⁶ and certification rapidly “became a *de facto* requirement for doing business in Europe and other parts of the world,” as well as being actually required for certain products sold in Europe and the United States (Roht-Arriaza 1995, at 500).

The idea of creating standards for management systems embodied in ISO 9000 has greatly fueled the development of the assurance industry (Wood 2006). One reason is that, while buyer firms likely have the appropriate expertise and incentive to inspect *products* to be sure they meet specifications, buyer firms may not have the necessary expertise to inspect the *processes* by which the products were made. Meanwhile, supplier firms might have the necessary expertise, but are unlikely to have

committees. Since its founding in 1947, ISO has published more than 16,000 product, technical, and performance standards for the characteristics and quality of raw materials and other tangible production inputs, ranging from agricultural products, grades of oil and gasoline, metals, ceramics and glues to electrical parts, nanotechnology, information processing, digital equipment, and so forth.. See <http://www.iso.org/iso/en/aboutiso/introduction/index.html> (last visited March 9, 2007). ISO standards often form the basis for trade treaties and agreements. See also Roht-Arriaza, 1995.

⁵ Prior to publication of ISO 9000 standards, the ISO had focused largely on developing internationally applicable technical standards for products and materials. ISO 9000 was established under the Technical Committee No. 176 (TC176).

⁶ The ISO Survey 2004, available at <http://www.iso.org/iso/en/prods-services/otherpubs/pdf/survey2004.pdf> (last visited July 3, 2006) provides data on the number of establishments that have been certified to ISO 9000 and some other standards. See also Wood, 2006.

the necessary independence to inspect and certify the operation of their own factories. Thus when it comes to process inspection, trading partners may be more likely to agree to third-party inspection rather than first-party (supplier firm) or second-party (buyer firm) inspections. Organizations that were among the first to qualify as certifiers for ISO 9000 compliance were generally European organizations that had already been providing quality inspection services for various products; more recently, accounting and audit firms have been expanding their business services portfolios to add capability to perform ISO 9000 certifications.⁷

Data collected by ISO show that the number of firms and facilities in the world that were ISO 9000 certified grew from 27,816 in 48 countries in 1993, to 670,399 in 154 countries by 2004 (ISO Survey).⁸ ISO provides no comparable data on the number of active certifying bodies, but this dramatic expansion in the number of firms and plants that have been certified could only be accomplished if the number of people and firms doing certification work had also grown dramatically.

Once the demand for management quality and process certification had developed sufficiently to support a private sector infrastructure to certify management systems, it was only a small step for business, government, non-governmental organizations (“NGOs”), and social activists to look to these same sorts of certifying organizations to provide assurance when asking companies to demonstrate that they are meeting specified criteria for social performance.⁹ In 1996, the ISO adopted the

⁷ Organizations originally in financial auditing, such as KPMG Performance Registra Inc., a wholly owned subsidiary in Canada of KPMG, LLP, and PricewaterhouseCoopers in Canada, have extended their services to ISO certification. See <http://www.kpmg.ca/en/ms/performance REGISTRAR/services.html> and <http://www.pwc.com/extweb/service.nsf/docid/5401765577527120852570CA001771D2> (last visited Aug. 10, 2006). However, a number of the certification bodies providing ISO9000 certification, including BVQI, UL, SGS-ICS, and the like, were already in the quality inspection services sector when the ISO 9000 standards were developed and promulgated.

⁸ See <http://www.iso.org/iso/en/iso9000-14000/pdf/survey10thcycle.pdf>; at p. 15, and <http://www.iso.org/iso/en/prods-services/otherpubs/pdf/survey2004.pdf>, at p. 10

⁹ The American National Standards Institute (which is the U.S. organizational representative to the ISO) notes growing pressures toward social performance certification on its website. See http://www.ansi.org/about_ansi/introduction/history.aspx?menuid=1 (“During the first years of the 21st Century, those involved in standards-setting activities clearly recognized

ISO 14000 series of standards for evaluating environmental management systems (Peglau 2002). By 2004, 90,569 facilities and firms, in 127 countries, had been certified as meeting these standards.¹⁰ And ISO is currently developing standards for social responsibility as well.¹¹

B. AN OVERVIEW OF ASSURANCE ORGANIZATIONS

In the past ten to fifteen years, numerous corporations, NGOs, industry groups, and other organizations have developed codes of practice for various industries. Firms that have long been in the business of inspecting the quality, quantity, and weight of traded goods – especially those that evaluate and certify conformance with ISO standards – have quickly expanded to offer their services in auditing and certifying that firm operations satisfy these new codes of practice. Firms such as SGS, Intertek, DNV (Det Norske Veritas), RINA (Registro Italiano Navale), and the TÜVs (Technischer Überwachungsverein) have all been in business as inspectors of goods and ships in international trade since before 1900.

a growing need for globally relevant standards and related conformity assessment mechanisms. ‘Market forces’ such as global trade and competition; societal issues such as health, safety and the environment; an enhanced focus on consumer needs and involvement and increasing interaction between public-sector and private-sector interests were significantly impacting standardization and conformity assessment programs. Standards themselves had expanded well beyond documents identifying product specifications to instead focus on performance issues and to also include processes, systems and personnel.”)

¹⁰ See <http://www.iso.org/iso/en/prods-services/otherpubs/pdf/survey2004.pdf>, at p. 20.

¹¹ See <http://isotc.iso.org/livelink/livelink/fetch/2000/2122/830949/3934883/3935096/home.html?nodeid=4451259&vernum=0>

(“The guidance standard will be published in 2008 as ISO 26000 and be voluntary to use. It will not include requirements and will thus not be a certification standard. . . . The need for organizations in both public and private sectors to behave in a socially responsible way is becoming a generalized requirement of society. It is shared by the stakeholder groups that are participating in the WG SR [Working Group on Social Responsibility] to develop ISO 26000: industry, government, labour, consumers, nongovernmental organizations and others, in addition to geographical and gender-based balance.” ISO asserts that these standards are not intended to be the basis for third-party certifications, however.

They all operate globally and have had a quasi-official status as inspectors for customs officials or government agencies regulating products moving in international markets. All have recently expanded their business to do audits and inspections to verify compliance with social responsibility standards.¹²

In addition, dozens of new firms have entered the business as certification bodies, including firms like Cal Safety Compliance Corp. (CSCC), ALGI, and Hong Kong Quality Assurance Agency (HKQAA). CSCC, for example, is a division of Specialized Technology Resources, Inc. in Los Angeles. It was established in 1991 to provide social responsibility auditing services, initially in the garment sector and now in a broad range of industries including home furnishings, food and agriculture, cosmetics, toys, and high-tech products, and has operations in more than 110 countries. Similarly, ALGI, headquartered in Nyack, NY, was founded in 1994 by several former Department of Labor officials to do social accountability auditing. TransFair USA was launched in 1998 and began "fair trade" certification of coffee purchased from developing countries in 1999. It has since expanded to certification of other food products. HKQA was established in 1989 by the Hong Kong government to do social compliance audits.¹³

¹² DNV, established in 1864, primarily focuses on risk management certification and consulting, in particular for maritime, oil and gas, process and transportation industries. *See* <http://www.dnv.com/>. Intertek can be traced to three separate companies in 1885, including Thomas Edison's Lamp Testing Bureau. It initially provided maritime surveying and testing of electrical equipment; it now provides testing services and risk management for a wide range of businesses. *See* <http://www.intertek.com/>. RINA (Registro Italiano Navale), a company established in 1861 in Genova, has been providing ship classification and certification services since its establishment. *See* <http://www.rina.it/>. SGS, originally founded in 1878 in Rouen as a French grain shipment inspection house and later registered in Geneva in 1919, provides inspection services of traded goods, product testing services, and certification services for products, systems or services. *See* www.sgs.com/.

¹³ *See* CSCC, at <http://www.cscce-online.com/>; ALGI, at <http://www.algi.net/en/company.htm>; IKQAA, at <http://www.hkqaa.org/index.html>.

C. “PROFESSIONALIZATION” OF THE STANDARD-SETTING AND ASSURANCE INDUSTRY

The assurance business is itself largely unregulated. Standards are often set in collaborative processes led by industry trade groups, NGOs, and/or government regulators. For example, a “Voluntary Carbon Standard” (VCS) that provides “quality assurance for certification of credible voluntary offsets” was announced recently by The Climate Group, a nonprofit formed in 2004 as a consortium of industry, nonprofit groups and emissions market specialists including the International Emissions Trading Association (IETA) and the World Business Council for Sustainable Development.¹⁴ But there are no well-established and accepted training procedures or professional standards for those who “audit” non-financial performance indicators. Yet, by its nature it is a business that is rife with potential for abuse. This is because, as is true for financial audits, inspections and evaluations of systems and operating practices are usually arranged and purchased by a supplier company in order to provide assurance to a purchasing company that the supplier can meet, or has met contract terms, or complied with certain norms and standards. And, as is true in the business of providing financial audits, individual auditors might have incentives to accept payoffs in exchange for approval by the auditors. Likewise, the client firms whose facilities are being inspected might have incentives to offer such payoffs if it is cheaper for them to make the side payments than it is to comply with the codes or standards. Indeed, factory owners in developing countries who are being asked by their developed-country customers to subject themselves to audit, frequently complain that the demands for audits are a form of extortion (Roberts, et. al. 2006). Inspection organizations also complain of finding double books, or that workers have been instructed to answer questions in certain ways, or other deceptive practices. *Id.* And factory owners complain of having to meet multiple, sometimes conflicting standards, and be subject to repetitive inspections to satisfy different customers. *Id.*

Suppliers of financial auditing services long ago figured out that there are two basic mechanisms for addressing this problem: professionalization of the providers of the service, and investments by the

¹⁴ See “Emissions Trading: Consortium Issues Carbon Standard to Certify Credits Earned in Voluntary Carbon Markets,” Daily Environment, No. 223, Nov. 30, 2007.

providers in reputations for independence and honesty. Professional accountants are now required to go through formal training and licensing by organizations representing accountants, and they typically organize themselves into large, high-visibility firms with substantial interest in maintaining reputations for honesty, independence, and competence. Those firms, in turn, have incentives to see to it that their auditors are competent, disciplined, and behave in professional ways.

These things are only beginning to happen in the non-financial assurance business. Although the leading international firms in the business have substantial reputational capital at risk, many smaller, newer assurance firms are in the business that may not yet have established reputations. Moreover, there appears to be only one significant professional organization that offers any standardization and assurance of the assurance professionals themselves.¹⁵ This is the International Register of Certificated Auditors (IRCA), a UK organization based in London that was founded in 1984 as part of a UK government initiative to establish and certify quality management standards. IRCA certifies auditors of management systems, approves training organizations and certifies their auditor training courses. It claims to have certified more than 13,750 auditors in over 120 countries worldwide. Generally, however, there is “very little oversight” over the assurance industry (Wood 2006).

¹⁵ Several Chinese government agencies have taken steps in the direction of providing some sort of government regulation of the inspection and assurance business, however. In 2003, the Chinese government promulgated the Certification and Accreditation Act, under which certification institutions are required to obtain governmental approval, meet the minimum capital requirement (RMB 3 million, which is about USD 407,000), and comply with conduct standards addressing potential conflicts of interest (e.g., institutions cannot accept financial contributions that would impair their independence; auditors cannot be employed by two certification institutions simultaneously). In 2004, the Chinese government passed Regulations on Auditors, Certification trainers and consultants, under which auditors, trainers and consultants are required to be registered with the government. To become registered, auditors, trainers, and consultants must meet certain eligibility requirements, take various courses, and pass a series of exams. Currently the registration process is administered by the China Certification and Accreditation Association (CCAA), a non-profit organization subject to the supervision of the Chinese government. See CCAA, <http://www.ccaa.org.cn/ccaa/default.html>. As of Dec. 31, 2005, there were 55,340 registered auditors for ISO 9001 certification and 17,550 registered auditors for ISO 14001 certification in China. See Certification and Accreditation Administration of the People’s Republic of China, ALMANAC OF ASSURANCE SERVICES IN CHINA 499 (2006) [Zhongguo renzheng renke nian jian 2006].

III. FACTORS CAUSING PROLIFERATION OF STANDARDS AND GROWTH IN DEMAND FOR ASSURANCE SERVICES.

A number of different factors seem to be at work that, together, are driving the rapid proliferation of standards and associated growth in demand for assurance services, as well as in the supply of businesses that offer their services as inspectors and auditors to meet this demand.

A. EXPANDING INTERNATIONAL MARKETS INCREASED RELIANCE ON OUTSOURCING, AND LONGER SUPPLY CHAINS.

Other scholars have written at length about the growth in international commerce in the last few decades,¹⁶ and the extent to which corporations in developed countries now contract with developing country firms for parts manufacturing, assembly, testing, and even sales (e.g., call centers) and record-keeping (Geis 2006; Lohr 2006). When products are made in factories owned by, and under the immediate supervision of managerial employees of a large firm, that firm can directly implement its own quality, timely delivery, labor, and environmental operating norms and standards. When the same firm contracts with a factory owner in Bangladesh, or Vietnam, or Costa Rica to make the products, the parties to the contract will probably need to develop detailed product specifications and alternative mechanisms, other than direct managerial control, to make certain that the products are made according to these specifications (both as to product characteristics and quality, and as to the processes used). These mechanisms may range from the hiring firm having its own inspectors in the contractor's plant at all times, to having third party inspectors check the plant's operations from time to time, to relying solely on inspection of the final product at the time the hiring firm takes possession of it. This last mechanism may be widely-used for simple

¹⁶ The international trade literature in particular tracks this growth. *See e.g.*, International Monetary Fund and World Bank, (2001); OECD (2006).

commodity-type products made in uncontroversial ways. But, they are less likely to be effective where there are hidden attributes of a product, or the process by which it was made, that are important to the buying firm.

B. THE GROWING COMPLEXITY OF PRODUCTS AND INCREASED DIVISION OF LABOR.

More of the products being exchanged between firms in international markets are intermediate products that must meet strict specifications as inputs or components of other products, or are made utilizing processes that are controversial (e.g., strip mining, farming with patented seeds, or fertilizers and pest control chemicals, or labor-intensive assembly potentially involving sweatshop conditions or child labor) (Arndt & Kierzkowski 2001; Kysar 2004). It is common, for example, for products to be designed in one country, components to be purchased from suppliers in other countries, assembly work done in yet another country, all for shipment to markets in a number of other countries.¹⁷

At each step of the way, the corporations that are organizing all of this productive activity need to be able to control for quality, conformance to specifications, timely delivery of intermediate products to final assembly plants, and safety in both the manufacturing and use of the product. Throughout this process, inventories must be managed for cost-efficiency, and to provide required levels of customer service (Schary & Skjott-Larsen 1998; Jespersen, Skjott-Larsen 2005; and Ayres 2001). For such products, the purchasing company may have compelling reasons to want to specify performance features and monitor steps in the production process in one way or another.

¹⁷ Grossman and Helpman (2005) report that 30% of a particular American car's value "goes to Korea for assembly, 17.5% to Japan for components and advanced technology, 7.5% to Germany for design, 4% to Taiwan and Singapore for minor parts, 2.5% to the United Kingdom for advertising and marketing services and 1.5% to Ireland for data processing. This means that only 37% of the production value ...is generated in the United States" (p.36)).

C. ROLE OF INTERNATIONAL TRADE REGULATIONS.

The growth of the third-party assurance industry based on ISO standard-setting has also been fueled by developments in the regulation of international trade. Efforts in Europe to facilitate intra-European trade by harmonizing regulatory requirements initially emphasized compliance with European technical standards as a necessary condition for selling any goods in Europe. Thus, the standards developed by the European standard-setting agency, the Comite Europeen de Normalization (CEN), were applied to any goods sold in Europe. This led non-European companies to argue that technical and other standards, such as for quality and product safety, should be developed by the international standard-setting process of the ISO, rather than through a European process. That position was persuasive to negotiators developing the General Agreement on Tariffs and Trade (GATT) 1994/World Trade Organization (WTO) Agreement on Technical Barriers to Trade, which thus provides that where international standards for technical requirements exist, member states should use those standards as the basis for their own technical requirements (Roht-Arriaza 1995).¹⁸ As a consequence, ISO certification became necessary for a growing number of products, and as ISO standards expanded beyond technical specifications to quality and environmental management systems, a “huge industry of auditors, certifiers and accreditation bodies has emerged to serve these expanding certification needs” (Wood 2006).

D. THE GROWING DEMAND FOR WORKPLACE SAFETY, ACCEPTABLE LABOR AND HUMAN RIGHTS PERFORMANCE, AND ACCEPTABLE ENVIRONMENTAL STANDARDS.

In the last decade, for reasons we discuss below, many global corporations have begun seeking assurance that firms they do business with can meet social and environmental standards, in addition to technical

¹⁸ See *id.* at 494-95, *citing* the Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Agreement on Technical Barriers to Trade, . Apr. 15, 1994, art. 2.4, *reprinted in* H.R. Doc. No. 316, 103d Cong., 2d Sess. 1428 (1994).

and quality standards.¹⁹ This development is causing corporations in developing countries that are suppliers to more well-known global corporations to insist that their suppliers, in turn, also meet certain standards.

In this way, multinational firms may be drawing more small and local firms in more countries into their orbit. As this happens, we are observing a movement toward global standard setting and the associated use of third-party assurance firms to certify that standards are being met, even by supplier firms that still operate and sell primarily in their home country.²⁰

1. RECOGNITION OF THE RISKS TO GLOBAL BRANDS FROM PROBLEMS IN THE SUPPLY CHAINS

Global corporations are also more inclined in the last two decades to insist that suppliers, as well as their own facilities, meet certain social standards because they recognize that each link in the supply chain potentially exposes the whole operation to risks associated with that link.

¹⁹ One indication of the new attention by business firms to social and environmental performance is the publication in early 2007 of the first edition of the CSR PROFESSIONAL SERVICES DIRECTORY, which lists 443 organizations worldwide under 49 different service categories, offering assistance in meeting so-called “corporate social responsibility” (CSR) norms and standards. See <http://www.ethicalperformance.com/csrdirectory/index.php?PHPSESSID=c78e0151641014186bd7a2fa9d305c49> (last visited Jan. 19, 2007).

²⁰ Konzelmann, et. al., 2005, argue that IKEA, for example, is transferring its standards for quality, efficiency, and socially responsible behavior “globally to the mutual benefit of all the system’s stakeholder groups” by implementing its “IKEA Way on Purchasing Home Furnishing Products (IWAY) throughout its global supply chain.” To implement its standards, “IKEA contracts with independent auditors to inspect and monitor all suppliers with whom the company does business on an on-going basis,” according to Konzelmann, et. al., at 19. Similarly, British Petroleum and Shell are imposing requirements on smaller companies that provide maritime services to raise their standards for health, environment and safety and to secure certification of having met those higher standards. Interview with Anne-Maree O’Connor, Core Ratings (Member of the DNV Group), London, June 26, 2006 (notes on file with authors). That supply chain pressures can affect the standards of conduct expected of companies is consistent with the legal transplant literature. See Vandenberg, 2007; Miller, 2003.

The experience of companies in the chemical industry (beginning with companies operating in Canada), illustrate the pattern. Canadian chemical firms recognized as long ago as 1983 that risks in the handling of hazardous wastes in foreign operations can affect reputation and profitability of their worldwide organizations. To address these risks, a group of chemical companies led by Dow Canada and the Canadian Chemical Producers Association (CCPA), with encouragement from the Canadian government, agreed to develop a set of safe operating principles (O'Conner 2006). The 1984 explosion of a Union Carbide plant in Bhopal, India, accelerated the development and adoption of these principles, which came to be called the Responsible Care Initiative (RCI). Other chemical companies joined the initiative in an effort to improve the industry's reputation (Bélanger 2005).

The initiative originally included six standards for safe practice in chemical production, transport and control.²¹ Although the standards had been adopted by numerous chemical companies by 1988,²² by 1993, chemical firms were learning, as Responsible Care executive Brian Wastle explained to us, that the mere fact that “CEOs stated they had met their commitment meant nothing to an untrusting public.” So the standards were expanded to include provision for verification and ongoing improvement of performance.

Responsible Care executive Wastle reports that the standards now require that “teams of industry experts, public advocates and local citizens,” review each company every three years, and “write a consensus report summarizing the verification process and players, opportunities for improvement, findings, required corrective action and successful

²¹ The six categories of the original standards included 1) Community awareness and emergency response; 2) Research and development; 3) Manufacturing; 4) Transportation; 5) Distribution; and 6) Hazardous waste management. See Canada's Chemical Producers: Chemistry – a part of everyday life/Responsible Care, <http://www.ccpa.ca/ResponsibleCare/> (last visited June 22, 2006).

²² Chemical companies that were part of the original Responsible Care Initiative include Dow Chemical Canada, ICI subsidiary CIL, Union Carbide Canada, Imperial Oil Chemicals, H.L. Blachford, Rhone-Poulenc Canada, Ethyl Canada, Rohm & Haas Canada, Hoescht Celanese, General Chemical, Allied Chemicals, Shell (chemical division), Cyanamide Canada, and Polysar. Email from Brian Wastle, Vice President, Responsible Care®, Canadian Chemical Producers' Association, Ottawa Ontario, June 22, 2006

practices,” with verification certificates awarded once the work is completed.

Similarly, firms that use highly labor-intensive manufacturing and assembly processes, such as apparel and toy manufacturers, have responded to media attacks on firms whose products were allegedly made in "sweatshop" conditions²³ by developing codes of practice for their own factories and for supplier factories. But these firms have also learned that announcing codes of practice is not sufficient to solve the problem²⁴ – they must also develop implementation strategies and arrange for inspection and certification to be sure the codes are in fact implemented.

To enhance brand protection by tackling the implementation problem in one industry, for example, a group of corporations in the apparel and “sewn products” industries, together with industry trade associations,²⁵ provided seed money and technical support to form a third-party standard-setting organization called WRAP (Worldwide Responsible Apparel Production) in the late 1990s. WRAP was given the goal of establishing worker safety and human rights performance standards to be applied at the factory level, and to implement inspection and certification procedures.²⁶ WRAP is now formally an independent non-profit

²³ The iconic examples here include the negative publicity in the late 1990’s surrounding sweatshop working conditions in manufacturing plants making Nike products and Kathy Lee Gifford brand apparel for Wal-Mart. Williams, 1999; Schoenberger, 2000.

²⁴ Wal-Mart has posted 10 "Guiding Ethical Principles" on its website, and states that it periodically inspects its factories for implementation, and yet continues to come under fire for tolerating poor working conditions in supplier factories. Konzelmann, 2005; Brooksbank 2006; Greenhouse, 2006; Ellis, 2006.

²⁵ In 1998, several prominent U.S. apparel producers approached the American Apparel Manufacturers Association (which subsequently merged with the Footwear Industries of American and the Fashion Association to form the American Apparel and Footwear Association) to work collaboratively to develop and implement labor, health, safety and environmental standards at the factory level. See WRAP website at <http://www.wrapapparel.org/> (last visited June 21, 2006).

²⁶ The first result of the AAMA initiative was the twelve Worldwide Responsible Apparel Production Principles -- standards of labor practices, factory conditions, and environmental and customs compliance. The AAMA Board of Directors publicly endorsed these principles in 1998. For the next two years, the Association worked with producers, public interest groups, and development agencies to “design a process and develop an organization to monitor and certify factories for compliance—in hundreds of details—with the principles.” Statement of AAMA Board of Directors, *available at*

organization, governed by a board of directors of which, by the organization's bylaws, more than half must be unaffiliated with the apparel industry.²⁷ Factory certification by WRAP requires that the facilities meet initial standards, as certified by an approved independent monitor, and be subject to unannounced audits, and annual renewal.²⁸

The awareness of supply-chain risks is amplified by recognition on the part of corporations and their investors that a large share of the economic value that firms create is tied to their "brand value." But, as discussed above, brand value is only as good as its weakest link because expansion in international travel and communications makes it harder for firms to hide their "dirty laundry." Wal-Mart, for example, has undertaken a massive public-relations campaign, including drawing attention to its new code of ethics, to attempt to respond to critics who charge that its suppliers violate international labor norms.²⁹ Although its code notably lacks both specifics about standards of treatment for workers, and enforcement mechanisms,³⁰ Wal-Mart may very well not be the worst

<http://www.wrapapparel.org/modules.php?name=Congent&pa=whowpage&pid=26> (last visited June 21, 2006) The fruit of this work was the incorporation of WRAP in 2000 as a "501 [c] 6" organization.

²⁷ See <http://www.wrapapparel.org/modules.php?name=Content&pa=showpage&pid=5>. One of us (Blair) has served as an independent board member of WRAP since 2005.

²⁸ The organization is working to obtain commitments from apparel firms and retailers that products that carry certain brands must be made in factories that are certified. O'Rourke, 2005, describes and compares six major international programs that provide what he calls "non-governmental regulation" in the apparel and sewn products industries, including WRAP, Social Accountability International (SA8000), Fair Labor Association, Ethical Trading Initiative, Fair Wear Foundation, and Worker Rights Consortium. WRAP now has three levels of certification, with level C requiring 6 month renewal, level B requiring annual renewal, and level A, representing the highest level of compliance, requiring only biannual renewal.

²⁹ Wal-Mart's website notes that its "Global Ethics Office" was established in June, 2004, and, on June 4, 2004, according to the website, "Wal-Mart released a revised Global Statement of Ethics to communicate our ethical standards to all Wal-Mart facilities and stakeholders. The Global Ethics Office provides guidance in making ethical decisions based on the Global Statement of Ethics and a process for anonymous reporting of suspected ethics violation. . . ."

³⁰ "Wal-Mart's principles are:

offender among U.S. retailers in its tolerance of labor abuses in supplier factories. But because of the high visibility of its brand, it is believed to be very influential in establishing industry norms, and hence may be targeted more intensely by NGOs and other activists than smaller, less well-known firms.

2. THE INCREASING SOPHISTICATION OF NGOS, ACTIVISTS, AND INSTITUTIONAL INVESTORS.

As corporations find themselves in the glare of the NGO spotlight for their social and environmental practices, a growing number of firms are looking for better ways to make sure they know what is actually happening out in their supply chains. Moreover, activists and investors are increasingly asking corporations to provide information about their social performance. Certain sectors of the investment community, such as public pension funds and the self-described “SRI” funds (Socially Responsible Investment) in the EU, UK and US, and insurance investors in the UK, are increasingly looking at the social and environmental performance of their portfolio companies and those companies’ trading partners in an attempt to identify risks associated with the portfolio firms as well as their trading partners out in the supply chain.³¹ This, in turn, has created demand for

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1. Follow the law at all times.
 2. Be honest and fair
 3. Never manipulate, misrepresent, abuse or conceal information
 4. Avoid conflicts of interest between work and personal affairs
 5. Never discriminate against anyone
 6. Never act unethically – even if someone else instructs you to do so
 7. Never ask someone to act unethically
 8. Seek assistance if you have questions about the Statement of Ethics or if you face an ethical dilemma
 9. Cooperate with any investigation of a possible ethics violation
 10. Report ethics violations or suspected violations

³¹ Brooksbank, 2006, reports an announcement by Norwegian Government Pension Fund that it had divested its holdings in Wal-Mart on the grounds that the fund would “incur an unacceptable risk of contributing to serious or systematic violations of human rights by maintaining its investments in the company.” Another example of investors being concerned about social compliance is the Association of British Insurers in London, which represents 94% of UK insurers. Insurance companies in the UK offer savings and

services of firms that can audit the quality of the non-financial information being produced. Some major accounting firms, such as KPMG and PricewaterhouseCoopers, have recently established global sustainability practice groups, for example, with the specialized expertise necessary to attest to environmental and social data.³²

The activism of NGOs is accompanied by a proliferation of social and environmental responsibility standards over the past ten years. These initiatives have been developed by states, public/private partnerships, multi-stakeholder negotiation processes, industries and companies, institutional investors, functional groups such as accountancy firms and social assurance consulting groups (many of which did not exist more than about five years ago), NGOs, and non-financial ratings agencies (Conley & Williams 2005; Williams & Conley 2005; Williams 2004).

One example (among many) is Social Accountability 8000 (SA 8000), a project of Social Accountability International. SA 8000 is an auditable certification standard based on international labor and human rights standards.³³ SA8000 also provides a social accountability management system to guide firms in implementing standards and to demonstrate ongoing conformance with the standards. In particular, to meet SA 8000 standards requires third-party certification of individual production facilities such as factories or farms, based upon an inspection

investment products in addition to insurance, and control 17% of all UK company publicly-listed equity.

See http://www.abi.org.uk/BookShop/ResearchReports/Key%20facts%202005_LR.pdf (last visited Feb. 14, 2007). These insurers ask their clients to provide information on environmental, social, and governance risks. See Part 3.5 below.

³² See KPMG Sustainability Services, *available at* <http://www.kpmg.nl/site.asp?Id=40378> (last visited Feb. 5, 2007); Price Waterhouse/Coopers Sustainability Practice Website, *available at* <http://www.pwc.com/extweb/challenges.nsf/docid/58E92287890B5314852570980064AC2> (last visited Feb. 5, 2007).

³³ This standard is a voluntary, universal standard for companies interested in auditing and certifying labor practices in their facilities and those of their suppliers and vendors, based on the principles of international human rights norms as described in International Labour Organisation conventions, the United Nations Convention on the Rights of the Child and the Universal Declaration of Human Rights (Overview of SA8000, *available at* <http://www.sa-intl.org/index.cfm?fuseaction=Page.viewPage&pageId=473> (last visited August 10, 2006).)

by SAI-approved inspectors and other third party inspectors. Corporations that seek SA 8000 stamp of approval must stipulate in written purchase contracts with all suppliers that those suppliers conform to the SA 8000 standards.

In addition to apparel and chemicals, discussed above, a number of other industries have promulgated voluntary corporate social responsibility standards that incorporate third-party certification that products being sold have been produced, harvested or extracted according to the standards, such as certification of conflict-free diamonds,³⁴ sustainable fisheries³⁵ and forestry;³⁶ and fair-trade goods such as coffee, tea, cocoa and cotton.³⁷ Thousands of individual companies have also adopted voluntary codes of conduct establishing their standards for responsible business behavior, and some companies then engage third-party certifiers to ensure that their suppliers and subsidiaries are meeting those codes. The development of codes and standards and the increasing expectation that global firms take responsibility for implementing and enforcing these standards throughout

³⁴ The Kimberly Process, *available at* <http://www.kimberleyprocess.com:8080>. The Kimberly Process is a joint government, international diamond industry and civil society initiative to ensure that shipments of diamonds are free of “conflict diamonds” that have been sold to support wars in such countries as Angola, Cote d’Ivoire, the Democratic Republic of Congo and Sierra Leone. All significant diamond producing and trading centers, with the exception of Liberia, are now operating within the framework of the Kimberly Process.

³⁵ The Marine Stewardship Council certification process, *available at* <http://www.msc.org>. The Marine Stewardship Council is a global non-profit that has created an environmental standard for well-managed fisheries, according to which third-party certifiers can grant labels that assure that fish have been grown in well-managed fisheries, or caught according to environmentally sustainable principles. As with many of the certification schemes for products, an important part of the certification is of “chain of custody” procedures that attempt to ensure the value of the certified label.

³⁶ Forest Stewardship Council: Principles and Criteria for Forest Stewardship, *available at* <http://www1.umn.edu/humanrts/links/fscprinciples.html>. The Forest Stewardship Council (FSC) is an international body composed of industry participants, transnational environmental NGOs and social justice NGOs, strongly influenced by international standard setting processes at the ISO, and which accredits organizations to certify timber and forest products as meeting the FSC standard for sustainable forest management. Meidinger, 2006.

³⁷ See http://www.fairtrade.net/certification_mark.html for an overview of the fair trade requirements.

their supply chains have greatly expanded the role of third-party standard-setting and assurance in global business, even though the early impetus for this expansion was driven by demand quality, speed, timely-delivery and cost control.

E. THE GROWING DEMANDS FROM INVESTORS FOR TRANSPARENCY, QUALITY, AND SOCIAL RESPONSIBILITY

Institutional investor networks are also asking for improved quality and quantity of information from their portfolio companies. Investors in the UK have been leaders in this development. In 2002, for example, the Association of British Insurers (ABI), which represents insurers that control 17% of stocks listed in the UK, issued its Disclosure Guidelines on Social Responsibility.³⁸ In those guidelines, which it updated in 2005 and 2007, the ABI stated that it expects portfolio companies to provide information on an annual basis about how boards of directors evaluate and are addressing environmental, social, and governance risks, in the context of the entire range of risks and opportunities facing the company.³⁹

Climate change has become a particularly salient environmental risk that U.K. investor networks target in their disclosure requests. One example is the Carbon Disclosure Project (CDP), a process by a group now comprised of 284 British, European and American institutional investors, with \$41 trillion of money under management.⁴⁰ The CDP elicits information on an annual basis from companies worldwide about the financial risks to the companies from the physical effects of climate change or from regulatory efforts to mitigate those physical changes, and about company actions to manage and reduce greenhouse gas emissions. In 2007, CDP sought information from 2,400 of the world's largest quoted companies, by market capitalization, expanding its requests beyond the Global 500 to include the largest companies in various developed and

³⁸ See <http://www.abi.org.uk/Newsreleases/viewNewsRelease.asp?nrid=3676>.

³⁹ See [http://www.politics.co.uk/press-releases/domestic-policy/environment/environment/abi-publishes-responsible-investment-disclosure-guidelines-\\$464874.htm](http://www.politics.co.uk/press-releases/domestic-policy/environment/environment/abi-publishes-responsible-investment-disclosure-guidelines-$464874.htm) (last visited Feb. 14, 2007).

⁴⁰ See Carbon Disclosure Website and Reports, *available at* <http://www.cdproject.net>.

rapidly developing markets, as well as the largest companies in transport and utilities. These pressures from institutional investors in the UK and Europe have been an important impetus for new requirements in those jurisdictions for companies to discuss future risks to the business from social, environmental and community matters in their Annual Reports.⁴¹

At the same time, firms and investors increasingly recognize that traditional financial measures fail to capture the value within companies from such intangible factors as employees' knowledge, training and development (Blair & Wallman 2001; Lev 2001; Eccles 2006). The recognition that such factors are important is driving a search by corporations, consultants, auditors and institutional investors for auditable non-financial metrics that can be used to measure and report on company performance in developing and protecting important intangible assets such as employee capabilities, brand, and reputation.

The pressure on companies to collect and disclose more relevant non-financial information, has been accompanied by pressure to have their approach to assembling such data subject to third-party review. In 2005, 52% of Global 250 companies issued non-financial, sustainability reports, including social, environmental and economic data, and of these, 30% included independent, third-party assurance of the quality and accuracy of the underlying data. Major accounting firms currently dominate the non-financial assurance and attestation market, issuing attestation statements for 60% of those sustainability reports that are independently verified.⁴²

At least two global standards are under development for the assurance of non-financial reports. In March, 2003, the UK based

⁴¹ As of 2005, companies in Europe are required to include "a fair review of the development and performance of the company's business and of its position, together with a description of the principal risks and uncertainties that it faces." In addition, "to the extent necessary for an understanding of the company's development, performance or position, the analysis shall include both financial and where appropriate, nonfinancial key performance indicators relevant to the particular business, including information relating to environmental and employee matters." Directive of Parliament 2003/51, art. 1, 14(a), 2003 O.J. (L 178), at 18. For a further discussion of these requirements, see Williams & Conley, 2005.

⁴² KPMG Global Sustainability Services, *KPMG International Survey of Corporate Responsibility Reporting, 2005*(2005), available at <http://www.kpmg.com/NR/rdonlyres/66422F7F-35AD-4256-9BF8-F36FACCA9164/0/KPMGIntlCRSurvey2005.pdf> (last visited 7/3/2006).

AccountAbility organization issued AA 1000AS, which focuses on evaluating the materiality, completeness and responsiveness of a company's reporting to its various stakeholder groups.⁴³ In December, 2003, the International Federation of Accountants (IFAC)'s International Auditing and Assurance Standards Board (IAASB), which is the body responsible for issuing international accounting and auditing standards, issued guidance for accounting firms to use in order to guide their assurance work for non-financial reports. This standard is applicable to any assurance work by accountants after January 1, 2005, and was needed, according to the IFAC, to meet the increasing demand for assurance reports on "[e]nvironmental, social and sustainability reports, information systems, internal control, corporate governance processes and compliance with grant conditions, contracts and regulations."⁴⁴

IV. THIRD PARTY ASSURANCE IN FOOD PRODUCTS AND APPAREL INDUSTRIES

Extensive use of third party inspection, assurance, and certification services has been noted by scholars who have studied and analyzed the reorganization of specific industries in recent years to use supply chain production methods spanning multiple countries. Two prominent examples of such industries are food products and apparel. In this section we discuss the growing role of standards in production processes and of third party inspectors to help enforce standards in these two industries.

⁴³ See <http://www.accountability.org.uk/news/default.asp?id=158> for a description of AA 1000AS and related technical materials.

⁴⁴ See International Standard on Assurance Engagements (ISAE) 3000: Assurance Engagements other than Audits or Reviews of Historical Financial Information See IFAC Press Release, *IAASB Issues a New Framework and Standard for Assurance Engagement*, Jan.23, 2004, available at <http://www.ifac.org/News/LatestReleases.tmp1?NID=10748895832047605>.

A. SUPPLY CHAIN CHARACTERISTICS

The organization of production through “chains” of firms in different countries, linked by contracts and long-term relationships in which suppliers produce goods to meet detailed specifications by buying firms, has been discussed extensively in the literature on “supply chain management.”⁴⁵ An important recent article in this literature categorizes governance arrangements in what it calls “global value chains” into five types, which they label “hierarchy,” “captive,” “relational,” “modular,” and “market” (Gereffi, Humphrey & Sturgeon 2005).

“Hierarchy” refers to production within a single, vertically-integrated corporation, where that corporation can directly control the activities of the overseas subsidiaries or subunits that are designing the products, acquiring raw materials, making components, assembling them into finished products, shipping the products to market, and marketing them. Hierarchical governance, these authors argue, is most likely to be used when the production chain is especially complex, with substantial interdependencies between steps of production, and when it requires firm-specific, or relationship-specific investments and a high level of coordination between steps.

At the other end of the spectrum, “market” governance refers to production carried out by a series of independent firms each producing generic products that are sold in arm’s length transactions, perhaps even on a “spot” market, to the trader or broker or firm carrying out the next step or activity. Market governance is more likely to be used where products are simple, outputs of each step are commodities, and production steps are not interdependent. These two types correspond to the broad alternatives identified by Oliver Williamson in his classic work on transactions costs, and the choice between “markets” and “hierarchies” (Williamson 1975). If production is governed by an internal hierarchy there is no need to rely on standardization and third party assurance, since the firm can monitor and manage the production process directly.

⁴⁵ See, e.g., PHILIP B. SCHARY & TAGE SKJOTT-LARSEN, *MANAGING THE GLOBAL SUPPLY CHAIN* (Copenhagen Bus. Sch. Press 2d ed. 2001) (describing the supply chain literature); BIRGIT DAM JESPERSEN, TAGE SKJOTT-LARSEN, *SUPPLY CHAIN MANAGEMENT: IN THEORY AND PRACTICE* (2005) (giving a varied picture of supply chain management); JAMES B. AYERS, *HANDBOOK OF SUPPLY CHAIN MANAGEMENT* (2001) (presenting a broad view of the supply chain).

Likewise, production governed by markets requires no third party inspection or assurance because the process by which products are produced is not relevant to the buyer, terms of engagement are set by competition, and the products themselves can be inspected before or at the time they are purchased.

A large portion of goods and services that move in international commerce are not commodities, however, but involve some intermediate level of complexity, specificity, and coordination problems. The design, production, and marketing of those goods are increasingly carried out through some intermediate governance arrangement, involving a combination of contractual, network, and norm-driven relationships between firms in the chain Gereffi, Humphrey & Sturgeon (2005) classify these intermediate arrangements as “modular,” “relational,” and “captive,” according to the degree to which the “lead firm” in the chain of producers controls the other firms.

“Captive” governance refers to “networks of small suppliers [that] are transactionally dependent on much larger buyers” (Gereffi, Humphrey & Sturgeon 2005, at 84). In such arrangements the large buyer firms often have substantial market power in relation to the small firms, and exercise a large degree of control over them. This control may be exercised by having managers and inspectors from the buyer firm supervise production within the supplier firm factories. Alternatively, and with growing frequency, both buyer firms and supplier firms may prefer that contractors submit to third-party inspection, verification, and certification (Humphrey & Schmitz 2003).

In the apparel industry for example, if lead firms turn to contractors merely to assemble cut fabric according to detailed instructions from the lead firm in the supply chain, this relationship is considered an example of “captive” governance. Contractors that interpret designs, convert sketches and general instructions to detailed patterns, find their own sources of fabrics and trim components, and cut the fabric as well as assemble the components, by contrast, are considered “full package suppliers,” involved in a “relational” governance arrangement with the branded apparel firms and retailers.

“Relational” governance applies to production carried out across multiple independent firms, involving “complex interactions between buyers and sellers,” “mutual dependence,” and “high levels of asset specificity.” Here the firms in the production chain do not control each other, but since each will have to make some investments that are specific

to the relationship, each may need reassurance that the other party can and will deliver on its end of the contract. Third-party inspection and/or certification can help provide that assurance.

In “modular” production, the product is one that can be assembled from modules or components for which the buyer’s specifications, even highly sophisticated and complex ones, can be “codified” and adequately interpreted and carried out by supplier firms that are capable of carrying out sophisticated production activities. If production activities can be separated into modules, the buying firm may need to exercise little or no control over the supplier firm and the chain of production may be governed by “turn-key” contracts between otherwise independent firms. Third-party inspection and certification is most likely to play a role in “modular” type of governance at the stage when the contract is negotiated, to reassure the buying firm that the supplier firm has the capabilities required to carry out the contract

Modular production is also facilitated by the development of product and process standards that are measurable and quantifiable and that reduce uncertainty at the interfaces between steps in the production process and misfits between components of the finished product. These standards may often be set by third-parties, and in some cases may be enforced by third-party inspection regimes. The U.S. electronics industry provides an example of supply-chain production in which major activities have been “modularized,” so that “standardized protocols for handing-off computerized design files and highly automated and standardized process technologies [make] it easy for lead firms to switch and share contractors, and [reduce] the build-up of specific assets,” according to Gereffi, Humphrey & Sturgeon (2005, at 95).

For a variety of reasons, pure market governance and pure hierarchical governance arrangements are becoming much less likely to be used in many industries, and intermediate governance arrangements in supply chains are becoming more common. And it is in these intermediate governance arrangements where we are most likely to find deployment and use of third-party inspection, certification, and assurance organizations in supply chains. As it happens, both the food products industry and the apparel industry are increasingly dominated by supply chain governance arrangements of these intermediate types rather than by pure markets or by vertically integrated hierarchical firms.

B. FOOD PRODUCTS

The supply chains that bring fresh produce and processed food to grocery store shelves⁴⁶ have become thoroughly “globalized,” in the sense that production and distribution activities are functionally integrated and coordinated across several countries (Gereffi 1999). Until about a decade ago, however, governance arrangements were generally wholly market-oriented, with some steps of food production hierarchically controlled by branded food processing companies. Wholesale grain dealers, for example, bought grain in mostly anonymous markets, both domestic and foreign, and food product companies bought produce or corn syrup or flour or meat from first level processors and wholesalers, and transformed them into branded products which were then sold in market transactions to grocery stores. Government agencies inspected and graded many wholesale food products, and branded food processors tested purchased products for quality (Hatanaka, Bain & Busch 2005), but there was very little backward integration by food companies into growing or harvesting activities, and very little forward integration into retailing. Government agencies established certain safety and quality standards, graded products such as milk and meat, and inspected processing facilities. Supermarkets generally took responsibility only for how the products were handled once they hit the store warehouse.

In the last fifteen to twenty years, however, consumers have begun paying much more attention to food safety and healthfulness issues, as well as to issues related to how the food is produced, including use of pesticides, fertilizers, preservatives, and other chemicals, human rights and fair wages for farm workers, clearing of rainforests, renewability of fisheries, and treatment of animals. Moreover, consumers have shown a willingness to pay higher prices for food products that satisfy these preferences. Grocery store chains and some restaurant chains have seized on the interest by consumers in these issues to find ways to differentiate their products by the process by which they reach consumers, as well as by quality (Hatanaka, Bain & Busch 2005). Thus many retail food companies,

⁴⁶ Although a growing share of food consumed in the U.S. is restaurant food, we discuss the evolution of the industry that supplies food to grocery store. Many of the same factors are driving similar changes in the supply of food to branded restaurant chains, so we mention these factors as well.

especially high-end grocery stores and high-visibility branded restaurant chains have moved away from pure market approaches to supply chain management. Instead, these firms have been steadily building supply chains that are more “relational,” in which they enter into long-term contracts with specialty firms that in turn work only with a select group of large farming companies that either directly operate, or oversee operations of farms that use acceptable farming methods.

To do this, however, both the specialty wholesale firms and the retailers must have ways of assuring that the farming and/or husbandry methods used in fact meet the specifications of the retailer. The solution has been the development of a large variety of standards for agribusiness and food processing, sometimes in collaboration with industry trade groups, environmentalists, organic food advocates, and/or NGOs.⁴⁷ An important example of a food safety certification program that was developed through many iterations of private sector and government action is the Hazard Analysis and Critical Control Point (HACCP) program used to identify, prevent, and control food safety hazards. This program was first developed in the U.S. in the 1960s, but is now recognized and used worldwide, with various Chinese government agencies, for example, trying to implement and apply the standard for both domestic and exported food products,⁴⁸ and a new ISO food safety

⁴⁷ Hatanaka Bain, & Busch, 2005, at 357, notes that both public and private standards now exist for “food safety (e.g., Codex standards), food quality (private retailer or processor standards), Good Agricultural Practices, Good Manufacturing Practices and/or Good Management Practices (e.g., ISO 9000 standards), labor practices (e.g., SA 8000, ETI Baseline, and Fairtrade standards), environmental standards (e.g., ISO 14000 standards, Rainforest Alliance ECO-OK standards), and/or non-genetically modified materials.” See also Busch, 2000.

⁴⁸ In April 2002, the General Administration of Quality Supervision, Inspection and Quarantine of the People’s Republic of China (AQSIQ) formally released the Regulation on Sanitarian Registration of Firms for Export Foods, in which it requires firms that export six kinds of foods (canned food, fish and fishery products, meat, frozen vegetables, juices, fast food containing meat or fish) to implement HACCP. See AQSIQ Order No. 20, April 19, 2002. In March 2002, the Certification and Accreditation Administration of the People’s Republic of China (CNCA) promulgated regulation based on HACCP Certification. See CNCA Public Notice No. 3, 2002, at <http://www.cnca.gov.cn/tjwzcf/flfg/xzgf/644.shtml>.

management system, ISO 22000, incorporating HACCP and standardizing it across countries.⁴⁹

But while government imposed standards have long been important in the food industry, the private sector is now taking the lead in developing, implementing, and enforcing standards in most of the developed world.⁵⁰ The proliferation of private standards for use in business-to-business transactions has extremely high transactions costs, however, and is leading, in many areas, to efforts within industries to consolidate and develop harmonized standards (Henson 2006).

Standards are of little use unless they can be implemented and enforced, however, and this is where the role of third-party inspectors and certifiers comes in -- to provide assurance to customers that the products were in fact produced and prepared in the manner the retailer claims (Hatanaka, Bain & Busch 2005).⁵¹ Hence both private and public standards and third-party inspection, assurance and certification have proliferated in recent years.⁵²

C. APPAREL

Apparel production is highly labor-intensive and the technology involved is relatively primitive. Thus apparel is an industry for which a developing country with an abundance of low-skilled labor might have a “comparative advantage” (Abernathy, et. al. 1999; Gereffi 1999). In the

⁴⁹ Stories concerning the safety of imported food products, especially food from China were prominent in the news at the time of writing this article. See, e.g., Weisman, 2007; Barionuevo, 2007; Zhang & King Jr., 2007; China’s Food Safety, Economist.com Opinion, June 12, 2007.

⁵⁰ Major food retailers in the UK, for example, have, since 1990 increasingly utilized “private label products as a means to differentiate themselves from competitors and achieve market power through the supply chain,” and have adopted “protocols for suppliers that were enforced through second-party audits.” Henson, 2006.

⁵¹ Hatanaka, Bain & Busch, 2005, assert that “one of the primary reasons given for the proliferation of TPC [“third party certification] is its perceived character as independent and objective.”

⁵² The UN Commission on Trade and Development (UNCTAD) has estimated that as many as 400 private standards may exist for agriculture and food processing. See WTO G/SPS/GEN/746, Private Standards and the SPS Agreement, January, 2007.

last few decades, nearly all U.S. apparel assembly factories have been closed, and firms have moved production offshore in order to take advantage of low wages in developing countries. The move to offshore production has generally been accompanied by changes in the structure of the apparel industry that link retail, apparel production, and textile sectors tightly together in coordinated supply chains (Abernathy, et. al. 1999). Rather than integrating vertically by combining these activities in hierarchical firms, however, most of the large branded apparel firms (e.g., Liz Claiborne) have “outsourced” production to contractors in developing countries, while major retailers have developed their own network of contract suppliers for store-brand products. These new supply chain arrangements typically utilize some combination of “captured” and “relational” supply chain governance arrangements (Gereffi 1999; Abernathy, et. al. 1999).

Initially, the transnational corporations that were the “lead firms” in these supply chains, such as Nike, The Gap, and Wal-Mart, maintained tight control of their overseas contractor firms to ensure that they could supply sufficient quantities of the desired product, at a high enough level of quality and low enough price, and in a timely manner.⁵³ These contractors, in turn, began to establish networks of subcontractors that carried out much of the production for the lead firm’s market on demand,⁵⁴ but the overall supply chain governance model could still be characterized as “captive.” For some products, however, Nike and the others established looser relations with garment manufacturers who all use standardized bar codes, electronic data exchange platforms, labelling, and other methods of coordination. Codification and standardization of information systems enhances coordination between supplier and retailer, while also making it possible for the manufacturers to work for a variety apparel firms and retailers. Thus we see a shift in the apparel industry from tightly controlled

⁵³ Gereffi, 1999, at 47, quotes Jerome Chazen, one of founders of Liz Claiborne, saying that “. . . we had to train and develop [overseas manufacturers] by supplying technical help, trim, findings, and virtually all components. While we counted on them for their labor, we had to tell them exactly how to use the basic skills of their people and we had to watch them carefully, every step of the way.”).

⁵⁴ Locke observes, for example, that “by guaranteeing a significant number of orders and by placing Nike employees at these new factories to help monitor product quality and production processes, Nike was able to help its lead vendors establish an extensive network of footwear factories throughout Southeast Asia.”

“captive” governance arrangements to looser, more flexible “relational” governance arrangements (Gereffi 1999). And instead of putting their own employees into contractors plants to make sure the job is done right, they are relying more heavily on “vendor certification systems to improve performance” (Gereffi 1999, at 47).

In the 1990s, consumers and labor activists around the world began inquiring into labor conditions at factories making branded apparel and footwear products. At Nike in particular, activists called attention to problems of “underpaid workers in Indonesia, child labor in Cambodia and Pakistan, and poor working conditions in China and Vietnam,” (Locke 2002, at 9), among other problems. At first, Nike tried to dismiss these criticisms as not their problem because the factories were owned and operated by other firms. Regardless of how much actual control Nike exerted at the factory level, however, Nike found in the 1990s that it would be held to account for working conditions not only in “captive” manufacturing plants, but in all factories where its products were made (Locke 2002).

Nike’s experience was shared by several other high visibility branded apparel firms, including Kathy Lee Gifford and Liz Claiborne. As a result of activism by labor and NGOs, a number of standards for labor and environmental conditions in apparel and footwear factories have been developed, and a small army of inspectors and certifiers have taken up the task of attempting to enforce these standards in factories around the world.

At least half a dozen NGOs, as well as numerous apparel firms and retailers, have now established labor standards for apparel manufacturing facilities,⁵⁵ and dozens of organizations conduct “audits” of apparel plants around the world to promote compliance with these standards.

⁵⁵ Prominent independent standard setters for apparel firms include Social Accountability International, Fair Labor Association, Worker Rights Consortium, Worldwide Responsible Apparel Production, Ethical Trading Initiative, and the Clean Clothes Campaign. See discussion above in Part 3.4.1 In addition, the U.S. Dept. of Labor has identified more than 35 U.S. manufacturers of apparel or retailers of apparel products that have developed and subscribe to codes of conduct regarding their foreign operations. U.S. Dept. of Labor, ILAB – II., Codes of Conduct in the U.S. Apparel Industry, available at <http://www.dol.gov/ilab/media/reports/iclp/apparel/2b.htm>, last visited June 28, 2006.

V. IMPLICATIONS FOR THE THEORY OF THE FIRM

The problem of organizing complex production has for the most part been analyzed by law and economics scholars in a dichotomous way: production can be accomplished either through a series of market transactions, or under the guidance and control of a hierarchical governance structure within a firm (Coase 1937; Williamson 1975). A rich and well-developed literature has emerged in the last few decades analyzing these two modes, as well as “hybrid” modes such as relational contracts, and considering why one mode might be used in some circumstances, and the other in different circumstances (Williamson 2005; Williamson 1975; Klein, Crawford & Alchian 1978). And, as discussed above, a more recent, but rapidly growing, literature has explored how globalization is leading to more “outsourcing,” in which activities that were once carried on within a single firm are now being organized by contracts, across multiple firms, and often in multiple countries (Grossman & Helpman 2005; Feenstra 1998).

Nearly all of the economic literature on choice of organizational form, globalization, and the “outsourcing” phenomenon, however, implicitly assumes the existence of an institutional context in which rule of law is followed, minimum social standards and business norms are established and regulated (or are at least commonly accepted and followed within a given trade), and contracts can be enforced. We have seen, however, that production through supply chains as described above is moving into countries where rule of law is weak, property rights are uncertain, and courts cannot be depended on to enforce contracts efficiently. This suggests a puzzle. How are firms overcoming weak rule of law to move production outside of the firm into countries with underdeveloped legal regimes, since organizing production through contracts, especially with hybrid bilateral, long-term relational contracts, depends on clear property rights and efficient enforcement of contracts?

One mechanism is to import rule of law by, in essence, using private ordering to “mitigate conflicts and realize mutual gains from trade” (Williamson 2005: 14). Some mechanisms of private ordering, such as arbitration agreements, may be effective as a backstop to enforce global contracts between large, sophisticated parties. But the hazards of contracting seem unrelieved by an agreement to arbitrate between a small, foreign supplier and a large, branded buyer in such industries as apparel,

food, flowers, commodities, electronics, and so forth, because an arbitration finding must still, somehow, be enforced. Moreover, where commercial regimes that depend on private ordering have been studied, such as ranchers' border disputes in Shasta County (Ellickson 1991) or diamond merchants in New York (Berstein 1992), it has been concluded that such private ordering requires voluntary communities coherent enough to use the social sanctions of inclusion and exclusion effectively (Richman 2004). These private ordering regimes thus pose high barriers to entry (*id.* at page 2346), and seem unlikely to provide a general, transnational solution.

In this paper we posit that increasing standardization of products and processes, such as through ISO processes, in conjunction with third-party assurance and certification, provides an important institutional solution to the puzzle otherwise posed by moving production out of firms and into hybrids, networks, and global supply chains spanning "lawless" environments. Standardization and certification reduce a number of the costs of contracting that Coase identified with market transactions - undertaking negotiations, writing contracts and settling disputes - and so allow moving transactions out of firms. Standardization and certification can also provide a workable substitute for management within firms in a number of different kinds of productive arrangements, such as within supply chains, in joint ventures and within regional industrial systems. This approach may reduce the costs of communication about both contracting and management, again, making it easier to move production outside of firms. Beyond that, if regulation is understood to encompass establishing standards of behavior and providing a mechanism for evaluating compliance and enforcing those standards, standardization and third-party assurance provide a workable substitute for government regulation as well, permitting companies to enter long-term supply relationships with some confidence, notwithstanding weak rule of law environments. We will briefly elaborate upon these points.

In addressing the question of why some production is organized within firms instead of across markets, given the powerful price incentives that market transactions allow, Coase recognized various costs of market transactions that can be reduced by organizing within firms (Coase 1937: 38). Included within these transaction costs were the cost of discovering what prices are; and of negotiating contracts, addressing future uncertainties and resolving disputes (*Id.*, 38-41).

A number of the transaction costs Coase identified are clearly reduced by the use of broadly recognized standards for both products and processes. The ISO standards now cover product specifications for everything from nanotechnology to container ships, allowing suppliers to develop and market products that will be competitive across markets, and allowing buyers and suppliers to negotiate cheaply and with little ambiguity about product characteristics. Contracts can be more easily specified by reference to standards and certification processes to ensure enforcement, leaving fewer aspects incomplete.

Certifiable standards and third-party assurance have reduced the transaction costs of ensuring the quality of products produced outside the firm. The concept of the “quality” of a product has become more complex over the last decade, incorporating aspects of product differentiation, health, safety, social and environmental implications of both products and processes, trends that would otherwise seem to require more managerial involvement and thus movement of production into vertically-integrated firms (Ponte & Gibbon 2005, at page 3). Yet, ISO and other reliable standards have been developed that permit standardization of these otherwise complex phenomena, including the management systems to address them, permitting clear communication to industrial buyers and consumers through third-party assurance and certification to credible quality standards. Thus, we have not seen a movement of production back into vertically-integrated firms that we might otherwise expect as a consequence of the managerial challenges inherent in the increased complexity of the concept of product “quality”.

Standardization also has reduced the transaction costs of managing the types of inter-firm relationships necessary to move supply chain production away from “hierarchy” and toward “markets.” Nassimbeni (1998) identifies the managerial challenge of the intermediate governance arrangements seen in supply chains (“captive,” “relational,” and “modular”), described above, as the need to strike the right balance between not managing too tightly, in which case one loses the advantages of inter-firm production (i.e., flexibility and involvement of independent units), while still allowing enough coordination to render the activities of the independent units coherent with the overall goals of the productive project as a whole (Nassimbeni, 1998:545). Nassimbeni, relying upon Mintzberg (1983), emphasizes the importance of standardization of products, skills and processes as the main management technique necessary to coordinate various inter-firm inputs effectively.

Standardization also reduces the costs of communicating within supply chains. In a study of value creation in supply chain relationships, Cannon and Homburg (2001) summarized communications research showing that face-to-face communication is better for customized communication and for immediate feedback, but that it is more expensive than written or electronic communication, which is best reserved for communicating standardized information (Cannon & Homburg 2001). Given the proliferation of standards, cheaper communications technologies can be used to manage supply chain relationships, once established, by referring to recognized standards in contractual documents that largely follow standard formats, and by using third-party assurance to determine if those standards have been met.

Third-party assurance to various standards has a particularly important role to play in permitting private ordering regimes to extend globally and beyond close-knit commercial communities. Empirical evidence has demonstrated that certification is more likely to be sought the greater the distance suppliers and buyers are from each other, the more export-oriented the industry (Chapple et al. 2001); and the more difficult the process or quality is to observe (Jiang & Bansal 2003). Park, Reddy & Sakar (2000) summarize empirical data showing that many firms in the United States have begun using supplier certification processes to formally assess the management systems suppliers have in place, and that such supplier certification systems facilitate the move away from “captive” supply chain management structures to “relational” structures. These studies suggest that certification can provide a mechanism to permit the development of the trust that is necessary to sustain private ordering arrangements, notwithstanding a lack of geographic and social proximity.

VI. CONCLUSIONS

We have argued in this paper that an important contributor to globalization in recent years has been the rapid development of norms and standards for business processes (as well as products), and of third-party inspection and certification services that can provide assurance to contracting parties that acceptable processes will be followed. Following the model of financial accounting and auditing, which have been important to business activity for centuries, the idea of standardization, assurance,

and certification of process and activities by third parties has spread rapidly from providing assurance that firms can meet quality standards, to assurance that social and environmental norms are being met.

As global trade has expanded, and multinational firms have extended their reach into all corners of the globe, the standardization of business norms and practices has often been led by large, high-visibility branded firms that are organizing these activities. These firms have pushed to increase the share of inputs into complex products or services that are produced or carried out in low labor-cost parts of the world. Global firms have also wanted to increase their presence in and participation in the expanding markets in these same parts of the world.

But while they have wanted to participate in developing economy markets, global corporations have also wanted to avoid direct responsibility for day-to-day operations at the shop floor level in those countries. The result has been a greater reliance by lead firms in supply chains on complex contracts to govern the relationships between the lead firms and the contractors, rather than vertical integration, or extensive direct control of the contractor by the lead firm. The standard explanation for how this has been possible is that the technologies for transportation and communications have improved. The efficiency of transportation and communication has undoubtedly improved, but this may only explain the spread of business production and trade to new parts of the world, not the organization of this activity via contract rather than vertical integration. Complex contracts are only a viable method of organizing supply chain production if they can be adequately enforced. Because a great deal of supply chain activity takes place in parts of the world where rule of law is absent or weak, and courts are likely to be absent, corrupt, or incompetent, businesses cannot necessarily rely on formal legal contract enforcement.

We suggest instead that the move toward “relational” contracting rather than integration and direct control of contractors is a product of the development of new business institutions. We have examined two related institutions in particular – the development by business interests, NGOs, and other international organizations of clear standards for evaluating business processes, from quality management to observance of human rights to environmental responsibility, and the simultaneous emergence of assurance services that can inspect, evaluate, assure, and certify that contractors are satisfying the required norms.

Although these business institutions emerged initially to help solve purely commercial problems, they have been enlisted by activists

concerned about environmental and other social performance as a mechanism for putting pressure on global corporations to internalize the full social costs of their activities. In this way, these institutions may also serve the function of regulating global business activity, in a way that formal regulation at the state level, or formal international law, has so far not been able to accomplish.

The development of widely-applicable social and environmental norms for business processes and behavior, and private enforcement by third-party inspection and supervision, is by no means a mature or efficient institution. In the current environment, corporate codes of conduct and social responsibility standards have proliferated, resulting in much duplication in some sectors, with factory-owners complaining that they may have to have 40 or 50 inspections per year to satisfy 20 or 30 different customers, each with their own standards (Rafter 2005). Moreover, many of the standards are vague, and clear unambiguous performance indicators have not yet been created for satisfying those standards, unlike the ISO standards for products and management processes such as ISO 9000 or ISO 14001. The assurance industry also lacks its own professional standards and norms, and is often viewed as corrupt or corruptible by business people who are pressured to meet the standards. These are significant problems, to be sure.

But we believe that these problems will be resolved with time, and that third-party assurance will mature. Moreover, because it has emerged largely as a market-based solution, based on private ordering, third-party assurance may be an enduring feature of the global business environment.

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