

Working Paper No.1, December 1997

BANDWAGON OR BARRIERS? The Role of Standards in the European and American Marketplace

Michelle Egan

Assistant Professor in the School of International Service at American University, Washington, DC

© Michelle Egan

CWES website: www.pitt.edu/~wesnews CERN Virtual Library West European Research Resources website: www.pitt.edu/~wwwes **Michelle Egan** is an Assistant Professor in the School of International Service at American University, Washington, DC. She received her MA and Ph.D from the Department of Political Science at the University of Pittsburgh. She was a researcher at the Center for European Policy Studies (CEPS) in Brussels in the Internal Market and Business Strategy Unit working on issues related to the single market. She received funding from the British Politics Group of the American Political Science Association, as well as funds from the SSRC and Wissenschaft zu Kolleg, Berlin for research on standards and regulatory barriers to trade. She has recently published "The Political Economy of European Standardization" in Christian Joerges Ed., *Regulation and Risk* (Baden Baden: Nomos, 1997) and "International Standardization, Corporate Strategy and European Markets" in J. Greenwood and H. Jacek eds. *Organized Business and the New Global Order* (St. Martins Press/Macmillan, forthcoming 1997). Professor Egan is currently working on a manuscript on standards and European competitiveness. Her research focuses on trade policy, including regulation and competition policy in the US and EU.

All views expressed are personal and should not be regarded as the Center for West European Studies' position on the issues covered in the paper.

The Center for West European Studies (CWES), housed in the University Center for International Studies (UCIS) at the University of Pittsburgh, is publishing this new series of working papers presenting extended treatments of important issues facing the European Union. Two papers are published each year.

The Center for West European Studies has created this paper series with funding from the US Department of Education's Title VI grant program for National Resource Centers for Area Studies. These papers are distributed free of charge to US scholars and students specializing in Western Europe, as well as to members of the diplomatic and legal communities, the media and other interested specialists. All papers are also available on the CWES website.

Series Editor: **Martin Staniland,** Professor, Graduate School of Public and International Affairs

CWES Director: Alberta Sbragia, Professor of Political Science

Inquiries about this series and manuscripts for review should be submitted to:

Desislava Jordanoff		
Center for West European Studies	Tel:	(412) 648-7405
4E01 Forbes Quadrangle	Fax:	(412) 648-2199
University of Pittsburgh	E-mail:	<wesp+@pitt.edu></wesp+@pitt.edu>
Pittsburgh, PA 15260, USA		

CWES website: www.pitt.edu/~wesnews CERN Virtual Library West European Research Resources website: www.pitt.edu/~wwwes

This publication was made possible through a National Resource Center Grant of the United States Department

of Education.

BANDWAGON OR BARRIERS? The Role of Standards in the European and American Marketplace

Michelle Egan

Introduction

Recent discussions between European and American policy-makers and business have emphasized the role played by standards in hindering market access and restricting competition.¹ Differences in product or process standards are the subject of numerous trade disputes, and are seen as one of the central issues in transatlantic relations.² The importance of standards to the transatlantic business and policy community is further evidenced by their prominent role in negotiations in the Transatlantic Business Dialogue (TABD) and New Transatlantic Agenda (NTA).³ Business reaction was initially cautious as issues such as coordinating standards and regulatory policy were areas that had proved difficult to deal with in other international arenas such as the World Trade Organization (WTO), World Health Organization (WHO), OECD, and International Standards Organization (ISO).

Yet these new efforts at economic cooperation by the US and EU have gone beyond previous platitudes and recommendations, and are considered an important effort to tackle head-on some of the most intractable barriers to cross-border trade. But focusing only on transatlantic cooperative efforts can be misleading, as it deflects analysis away from sharp differences in government policy and corporate strategy pursued by the US and EU in their "domestic" markets. Because both the US and the EU value environmental and consumer protection, each is continually introducing new product standards and regulatory requirements which can vary significantly and intentionally, or not, favor domestic producers over foreign ones. While the ultimate goal of benefitting their economies through improved cooperation is pursued by both sides, success depends on creating the right framework conditions for trade by tackling the trade impeding effects created by differences between EU and US regulatory systems.

This paper explores the role of standards as non-tariff barriers in shaping the economic environment for business in both Europe and the United States. It focuses on the growing economic importance of standardization, first describing the way in which standards have become a key policy element of the single market in Europe. The paper then discusses the impact that changes in the European standards environment have had on domestic-business government relations in the US. Finally, the paper assesses bilateral efforts to foster transatlantic market access and trade liberalization through the initiatives of the TABD and NTA. If the US and EU agree to some form of trade pact to foster increased regulatory cooperation, many other states will be affected. Hence, efforts by the EU and US to work together to remove these obstacles are important not only for transatlantic relations but also for international efforts at regulatory cooperation.

The Economic Significance and Role of Standards

As tariffs have diminished in significance both at the regional and international levels, non-tariff barriers have become increasingly contentious issues in international trade. As one observer has noted, "the lowering of tariffs has, in effect, been like draining a swamp. The lower water level has revealed all the snags and stumps of non-tariff barriers that still have to be cleared away".⁴ Among the most significant of those barriers are the

diverse standards and regulations governing the sale of products in national markets. Referred to as "technical barriers to trade," these differences in national standards have ironically emerged as trade barriers, given that they were originally designed and developed as a means of promoting trade. Standards for weights and measures were established to facilitate fair trade and avoid fraud and discrepancies. Standards for computer operating systems, video recorders, and broadcasting are aimed at ensuring compatibility and have an enormous impact on future technological developments. Standards also ensure uniform dimensions on credit cards, as well as the familiar dashboard symbols on cars indicating lights, windscreen wipers and paper sizes.

But as new technologies and products have developed, firms have often used technical standards as a competitive weapon. Standards define the characteristics of a product, process or service. These characteristics usually determine the design, performance or safety requirements that are voluntarily agreed upon by interested parties. Though standards can provide significant benefits (as illustrated in Figure 1), standardization may carry serious drawbacks. Excessively detailed or unwarranted standardization may entail high cost, stifle product innovation, and reduce competition and diversity. Once entrenched, a dominant standard can be a barrier to change; few firms will support the adoption of new standards to challenge the market leader. It is frequently difficult to determine whether a standard will encourage innovation or act as a barrier to innovation by favoring domestic over foreign producers.

Figure 1: Benefits of Standardization

• • • •	Reduce costs through simplification of large-scale production processes. Provide production information and facilitate buyer-seller relationships Promote market information and confidence by signaling product quality, or compatibility of products or components Reduce liability and insurance costs Enable firms to exploit economies of scale Reduce costs of learning if certain items are standardized or become substitutable. Facilitates competitive corporate strategy, efficient management and effective commercial decisions if firms adopt quality standards and quality assurance schemes to enhance
9	e: Adapted from Pelkmans and Costello, 1991; Middleton, 1973

Standards are critical for competitiveness, promoting efficiency in production and distribution, and information and technology transfer. For some products, the choice of a particular standard determines not only future technological developments but also international trade flows. In communications and information technologies, with high pre-development costs and short product life cycles, the competitive stage of research and development can establish a market leader and effectively shut out alternative products.⁵ A single firm may achieve a competitive advantage in the manufacturing process and start a bandwagon effect among hundreds of firms.

In addition, differences in the testing and certification procedures for standards raise the costs for producers who sell in multiple markets. Testing and certification also raise issues of mutual trust and credibility, since difficulties in product approval may result from differences of opinion about scientific evidence, different regulatory approaches or the unwillingness to accept information from exporters, such as safety data and testing information.⁶ The extra costs of meeting different specifications and design requirements may cause

firms simply to give up trying to enter new markets. Additional obstacles and costs are also caused by differences in testing and quality marks.⁷ In many cases, components must be shipped to the testing body in the importing country, leading to further delays and increased costs. Even if products do meet different national standards, imports are often retested due to reservations about the technical competence of inspectorates and certifying bodies in other member states. Reluctance to accept the results of product safety tests from other member states causes high transaction costs, and produces anti-competitive effects in local markets. The EU has estimated that different national standards cost European industry about 8 billion pounds per annum.

The increased attention given by European and American policy-makers to the role of standards in the global economy stems from the impact that standards have on the international competitiveness of domestic firms and their role in facilitating or hindering trade for foreign importers. The EU's 1992 internal market program was a major impetus for a transatlantic dialogue on standards, as American firms expressed intense concern that the new regulations would be used to disadvantage American producers and products.⁸ Standards were given tremendous political visibility as American negotiators urged the EU to allow American firms to participate in European standard-setting and in certifying compliance with them. Following negotiations in 1989 between Commissioner Bangemann and Commerce Secretary Mosbacher, the EU agreed to increase the transparency and openness of their standard-setting. But, as we shall see, American policy-makers remain concerned about the impact of European standardization. This has led to on-going discussions between regulatory officials in both the US Department of Commerce and EU Directorate-General for External Affairs (DG I) over the increased trade friction resulting from differences in the rules, standards, and regulations that seek to protect public health, maintain environmental quality, and safeguard worker and consumer safety.

European Efforts to Tackle Technical Barriers

European firms have long been faced with substantial regulatory barriers to trade as a result of the diverse manufacturing standards and heterogeneous testing and certification requirements of Member States. Widespread barriers to entry have constrained corporate strategies and prevented firms from operating on a unified European basis. In technologically-driven industries, the barriers to entry created by diverse standards and regulations hindered economies of scale and efficient production structures as European firms were unable to forge a global unit.⁹

Since its foundation, the European Union has attempted to tackle these technical barriers and increase regulatory coordination through a policy of harmonization. For twenty-seven years (between 1958 and 1985), the European Commission sought to promote harmonization of national regulations by pushing for the replacement of national rules by European rules. The resulting policy of harmonization was ultimately viewed as inefficient, excessively uniform, and inflexible, since new national regulations were accumulating at a faster rate than the EU was able to harmonize. The delays and other disadvantages of harmonization stemmed from the Community's decision-making rules – specifically, their requirement of unanimity, that often led to a lowest common denominator agreement or no agreement at all. Foreign sectors facing competition and firms with low levels of growth and profits threatened by market liberalization continued to press for national 1986, non-tariff barriers increased by 36 % in Germany, 30 % in France, and 24 % across the European Community as Table 1 shows.

Table 1. Share of Total Imports Subject to Hard Core Non-tariff Barriers

Country	1981	1983	1986	Change between 1981-1986*
Belgium- Luxembourg	12.6	15.4	14.3	1.7
Denmark	6.7	8.0	7.9	1.2
Germany**	11.8	13.6	15.4	3.6
France	15.7	18.8	18.6	2.9
Greece	16.2	21.0	20.1	3.9
Ireland	8.2	9.7	9.7	1.5
Italy	17.2	18.7	18.2	1.0
Netherlands	19.9	21.4	21.4	1.5
EC (10)***	13.4	15.6	15.8	2.4

1

Source: Sam Laird and Alexander Yeats, "Quantitative Methods for Trade Barrier Analysis" Washington D.C., World Bank. Based on data provided by the UN Conference on Trade and Development (UNCTAD).

- * Based on non-tariff barriers applied to a constant 1981 trade base. This enables calculations of NTB changes while holding the effects of trade changes constant.
- ** These figures are for the Federal Republic of Germany.
- *** Excludes Spain and Portugal. Spain and Portugal joined the EC in 1986.

Although the estimates in Table 1 are consistent with other assessments of the extensive use of non-tariff barriers, they do not provide insights into the restrictiveness of the measures, or the extent to which these quantitative restraints are actually binding on exporters. Though these estimates of non-tariff barriers must be treated with some caution, there is consensus that the trade-impeding effect of discriminatory trade practices such as standards were considerable.¹⁰ The problems cut across a wide range of industries, from motor vehicles to computers to consumer electronics and wine and beverages.

Rather than continuing to use domestic remedies, in the form of denying equivalent access to national markets, the attention of policy-makers was focused on European solutions, in particular the *completion* of the European market and the strengthening of European preferences in such areas as technical standards and public procurement. With escalating R&D costs, shortening lead times and product life cycles, European firms perceived that such massive investments could only be recouped by increased standardization.

To advance the single market, the Commission had to fundamentally re-shape the context within which actors articulated their interests and strategies. Instead of trying to deal with the technical proposals themselves, the Commission developed a reform proposal dividing regulatory responsibility between the public and private sectors. The New Approach, adopted in 1985, provided a template for removing national restrictions on the free movement of goods.¹¹ Its main purpose was to ensure that only those regulations that were "essential" or "genuinely necessary" to protect health, provide consumers with adequate information, ensure fair trading and provide for necessary public controls would fall under EU harmonization legislation, leaving specific details to private standards-setting bodies.

The new strategy was based on four principles:

- harmonization was confined to broad regulatory requirements that must be met before products can be placed on the market.
- the necessary standards to ensure that products meet these broad regulatory requirements were to be established by the European standards bodies, CEN, CENELEC and ETSI.
- implementation and use of the standards remained voluntary; those firms that choose to meet the regulatory requirements without referring to European standards could choose to have their products tested and certified by independent auditors.
- products manufactured according to European standards were presumed to conform with all the necessary legal requirements for market access.

This represented a fundamental change in strategy and laid the groundwork for firms to participate in setting the rules for market access. It required national officials to shift from the old style of debating technical details to the broader goal of negotiating performance standards – in short, to getting Member States to accept the philosophy at the heart of the New Approach. Although the New Approach had important implications for the ability of firms to make informed choices about future alliance strategies, and minimize their own risks of choosing an inappropriate technology, it depended on the ability of those involved in standard-setting to reach some form of agreement (see next section). Equally important, the New Approach focused on performance rather than on design standards, which allowed interpretation and refinement to take place in response to technological development. This involved setting out broad performance criteria that firms must meet, leaving firms the flexibility to choose the most efficient and appropriate design to meet the necessary standards.

Some problems remained. The New Approach ignored the effects of multiple testing and certification or product approval processes that added significant burdens for business operating in multiple markets. The value-added of the New Approach would only be realized by addressing these obstacles. To tackle this issue, the Commission held a wide-ranging fact-finding session that attracted over four hundred participants in mid-1987.

Sensing widespread concern about divergent product approval requirements, the Commission pushed for the adoption of a comprehensive policy that became known as the Global Approach to Testing and Certification. Adopted in 1989, the Global Approach was designed to put in place "one-stop shopping": this meant that products receiving approval would not be required to undergo further testing and certification in another EU member state. Each country in Europe had its own system of certification marks: tests were carried out by national institutes according to national methods, and when certification was mandatory, countries generally recognized only their own national marks. This could mean that tests, on the basis of which certification is granted, had to be repeated in each country to gain market access. Obviously, a series of certification procedures carried out in parallel in different countries is not only costly for producers, but is a real competitive handicap for small and medium enterprises to achieve product entry on different national markets.

The Global Approach aimed at removing the inconsistencies between national testing and certification systems by promoting mutual recognition and ensuring that national testing and certification bodies were operating according to common criteria or standards. The existence of common standards would ensure that there would not be a race-to-the-bottom in terms of testing and certification standards. Instead, the Global Approach to testing and certification would promote increased product quality through the use of quality management systems.

This approach represents a key strategic policy for the European Union in its drive to improve the competitiveness of European firms within the EU and globally. As envisaged by the Global Approach, only "notified bodies" located in each member-state are empowered to grant final approval for regulated products, which could result in delays and additional costs for American exporters. The reluctance of European countries to accept the results of product testing conducted outside of Europe has been a persistent source of trade conflict between the US and Europe. However, the use of quality assurance standards as the basis for European market access has pressured many American manufacturers to put in place quality management standards, in the hope that their own domestic product approval practices will be acceptable in the European market.¹²

The Commission envisioned that market pressures would push testing and certification agencies to work closely together to agree on common product approval practices which enables firms to put a "CE Mark" on their product to indicate that it can be exported freely throughout the EU. Although the Global Approach won significant support from businesses faced with multiple costly testing procedures, it faced some opposition from small testing and certification companies anxious to protect their domestic market shares and to maintain control over the certification and standard-setting process.

European Standards Bodies, Corporate Strategies and Market Integration

European standard setting takes place predominantly in three institutions, CEN, CENELEC and ETSI.¹³ CEN and CENELEC are the "peak associations" representing the national standards bodies of each member state within the EU and EFTA. CEN and CENELEC have also introduced a new category of associate membership that gives access for countries such as Malta, Cyprus, and Turkey, and was expanded in 1991 to include Hungary, Poland, Czech Republic and Slovakia in preparation for their membership of the EU and compliance with European norms

While European firms applauded EU efforts to tackle technical barriers to trade, they were concerned about the prominent role assigned to European standards bodies. Although CEN and CENELEC were established in the mid-1960's to implement international standards, the European standards bodies played a marginal role in the European policy process. Seldom consulted by the European Union on technical issues surrounding harmonization, they existed as small, underfunded organizations propped up by national standards institutes as a means to hinder the creation of a European standards institute by the EU itself. The meetings of these European standards bodies received little attention outside of the national standards institutes. Business did not pay much attention to European standardization. Most European firms participated in standards activities at the national level in bodies such as the British Standards Institute (BSI), Deutsche Institut fòr Normung (DIN), and Afnor (Association Française de Normalisation).¹⁴ Until the mid-1980's, firms viewed the European standards bodies as weak organizations unable to provide the membership benefits, such as information and technical assistance, offered by the national standards bodies.

After the adoption of the New Approach, the Commission wanted to wrest control from the national standards bodies, particularly as they continued to adopt national standards without concern for their effect on intra-European trade. Impressed by the American commitment to telecommunications standard-setting, the European Commission decided to emulate the American approach by substantially reinforcing the emphasis on telecommunications by creating a separate standards body, the European Telecommunications Standards Institute (ETSI) in 1988. The Commission proposed ETSI as a flexible and modern organization since the existing European Conference of Posts and Telecommunications (CEPT) (established in 1959), operated on the principle of pure national autonomy and did little to promote compatibility among networks, equipment and services in Europe.

Unlike CEN and CENELEC, which were tied to the national standards institutes, ETSI provides industry, including non-European firms and users, with direct access to the standards-making process. Although manufacturers lobbied for a regional market with recognized European standards, distinct national standards enabled national postal and telecommunications networks (PTT's) to control access to their markets, prices and product- approval procedures. The fact that many services could not operate cross-nationally and were often incompatible meant that European firms could not benefit fully from new developments. With the advent of new technologies in microelectronics and data-processing, the national telecommunications systems incorporated these innovations without cross-national coordination. A European strategy to ensure compatibility and interoperability in telematics industries through ETSI was viewed by the Commission as critical for European competitiveness.¹⁵

ETSI represented a radical change in European standardization since all interested parties, including postal and telecommunications authorities, operators of public networks, manufacturers and other users, could participate **directly** in standardization work at the European level. ETSI bypassed national standards bodies and sought to bring "its own unique brand of standards-making to the European scene".¹⁶ However, it created some initial problems of coordination among the three standards bodies - each anxious to carve out its own sphere of influence in the standard-setting process. To foster standards in the information technology and telecommunications fields, the three European standards bodies agreed to set up an Information Technology Standards Technical Committee (ITSTC) as a joint body to coordinate their activities in this field.

A rapid and continuous increase in European standardization activity followed these initiatives. Table 2 illustrates the dramatic increases in the annual production of European standards.

Table 2.1: Annual Production of Standards and Associated Documents: CEN

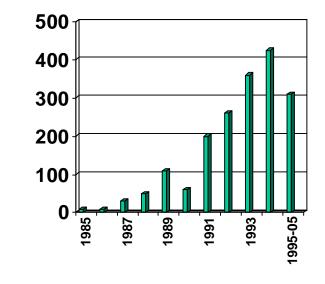
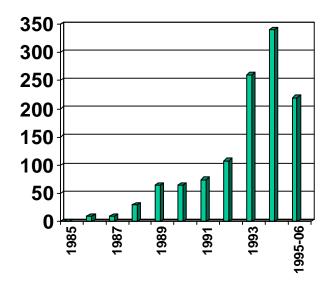


Table 2.2: Annual



But the

figures conceal the difficulty of achieving consensus. Fierce debate occurs within each of the European standards-setting bodies as interested parties try to influence the final version of the European standard. New standards may sometimes cause an upheaval in certain segments of the market, given their influence on relative costs or the production process. Significant changes at the European level can impose adjustment costs disproportionately across industrial sectors. Agreement on a common set of technical specifications is particularly difficult when several standards are equally satisfactory from a technical point of view. Because of such entrenched interests, it takes on average about four years to adopt a European standard, as compared to two years at the national level and eight years at the international level.

Standards-Setting: A Multi-Level Process

Creating standards is the essential but humdrum task of an army of committees within the three standards bodies. These committees are assigned the task of framing the issues to reach accommodation in such diverse fields as information technology, textiles, biotechnology, shipbuilding, banking and financial services. CEN, CENELEC and ETSI provide the framework within which this voluntary collaboration takes place, although these organizations do not set standards themselves. The three European standards bodies coordinate the activities of over 25,000 participants in more than 2,000 technical committees at the European level.

Increasingly, European business has focused on building coalitions within different technical committees. Most participants acknowledge that the process is time-consuming. European standard-setting operates on the basis of consensus or what one participant termed "the absence of substantial opposition". Standards participants talk consistently about the search for consensus, and their refusal to force decisions on reluctant members as this "could result in inappropriate or diluted standards which will often be a facade".¹⁷ As a result of the arduous process of reconciling differences, draft European standards are usually agreed upon by a small group willing to invest the resources and time. Since standards are public goods and, once developed, are available

to anyone, a firm can benefit from the existence of a standard without incurring the costs of participation. Standards bodies tend to rely on a firm's desire to stay abreast of technical developments and present its point of view as an adequate incentive. This motivates the more entrepreneurial firms and highlights the difference between adaptive and innovative organizations.

By the same token, however, this has made it extremely difficult for many other interests such as environmental and labor groups to put forward their opinions effectively. Large firms and trade associations play the dominant role in the process. Significant barriers are erected against the intermittent participation that may be feasible from small or medium companies, or trade unions and consumer groups. Because of their size, small and medium companies often lack the financial resources and necessary expertise to influence the pace and direction of standardization at the European level. To ensure a more balanced representation of interests, the EU provides direct support to weaker interest associations, such as the European Trade Union Federation (ETUC) and European Consumer Federation (BEUC). However, the degree to which they are able to influence the technical discussions is debatable.

Even if agreement is reached at the European level, it must then be ratified by the national standards bodies. This often provides an opportunity for labor, environmental groups and small firms to express their opinions without incurring the costs of participation at the European level. After intense public discussions for six months at the national level, draft European standards are then considered for adoption at the European level. This must be achieved through a qualified majority vote of all the national standards bodies.¹⁸ While many domestic firms do not participate in draft discussions and negotiations at earlier stages in the process, they can wreak havoc on carefully-crafted compromises by forcing their national standards bodies to vote against the draft European standard. This was noticeably the case in efforts to standardize plugs and voltages in Europe. After eighteen years of wrangling, the draft standard was vetoed by the British and Germans. Anxious to prevent such incidents from stalling the process unnecessarily, the EU Commission has continually pressed for reform of the European standards bodies to introduce a simple vote and prevent minority interests from stalling the process.

Although the growing importance of European standardization has drawn many firms into a complex array of transnational networks, EU officials worry about the difficulties of reaching agreement on European standards, especially in areas where multiple standards can create problems of inter-operability. Given the complexities of reaching consensus, the present European standardization system may not have the capacity to keep pace with technological changes. Anxious to prevent confusion and uncertainty for many businesses seeking to operate on a European-wide basis, the EU Commission issued, in 1990, a controversial Green Paper on the development of European Standardization. The Green Paper pushed for a number of institutional and procedural reforms: shorter deliberation periods, more team projects and long-range planning to improve the efficiency of the standards-setting process, and increased use of qualified majority voting when consensus is unobtainable. The extensive debate promoted by this document gave rise to a follow-up Commission Communication on Standardization in the European Economy,¹⁹ which reviewed reactions to the Green Paper. This was followed by a Council Resolution on the role of European standardization²⁰ which sets out guidelines for future policy.

The guidelines were significant in shaping the future direction of European standards activity. To ease the burden on the three European standards bodies, practical input is now provided by industry federations. Many standards are now set by associated bodies; these include ECISS (iron and steel sector), AECMA (civil aviation technology) and EWOS (information technology). This has speeded up the process and enabled the EU to achieve its goals of circumventing the national standards bodies through direct participation by firms and

industry federations in a particular sector.

Assessing European Policies

It is now over ten years since European standardization become a central component of the European single market. Approximately 5,000 European standards have been established, with much of this activity involving the development and amendment of standards in response to continued technological changes. European standardization now forms a substantial part of all standardization activities in Europe, and constitutes an essential link between national and international standardization. In particular, European policy-makers have recognized the need to coordinate their activities with those of international standards bodies, gaining a strategic advantage in international as well as European markets. Ironically, this linkage may be due to complaints from American policy-makers that the EU's preoccupation with the creation of a single market has left little room for consideration of the external ramifications of standard-setting. Such criticism has accelerated the internationalization of European standards and has led the European standards-setting bodies to propose that European standards be adopted at the international level.

The relative significance of European standardization has increased for two additional reasons. First, the use of European standards as an instrument of economic and industrial integration is increasingly attractive in a political climate that views EU regulations as burdensome and intrusive. Second, the European Union has pushed for the further development of European standards in other areas such as biotechnology, environmental management, food quality, energy, transport and information technology. The use of standards in new areas enables the EU to lighten its regulatory load and use the knowledge and expertise of industry to foster an integrated market.

Despite the increase in European standards, the EU continues to express concern about the pace and direction of European standardization. Standard-setting bodies have found it difficult to reach agreement on standards which confer competitive costs and benefits for European producers, such as high-definition television or accounting standards, or those which raise significant public health and safety concerns such as genetic foods or environmental management standards. Protracted disagreements have also led to the absence of standards in some critical sectors such as machinery and construction.²¹ In other areas, the Commission was forced to postpone implementation of legislation as standards were not yet available.²² This caused tremendous confusion and uncertainty for many businesses – both European and American – seeking to operate on a European-wide basis.

Many obstacles to the single market remain.²³ Part of the problem, according to the EU, rests with the standards bodies where there is "significant room for improvement". The EU Commission has continued to pressure the European standards bodies to shift towards a simple voting system for the adoption of European standards, rather than the complex system of rules that have allowed a small minority to block agreement.²⁴ Efforts to coordinate testing and certification policies have also been difficult. Member States' policies are based on different perceptions of risk, and safety, and may even vary due to cultural reasons. Mutual acceptance of testing and certification procedures has been marred by forcing firms to seek multiple product approval for market access, despite the supposed existence of the concept of mutual recognition.

Table 3 illustrates the number of obstacles to trade notified to the European Commission by business federations, individual firms and professional associations in 1995.

Member State	Road Vehicles	Food stuffs	Chemicals	Pharmaceutical & medical products	Telecoms	Construction	Other
Belgium	6	6	1	1	0	1	2
Denmark	2	0	1	1	0	0	1
Germany	4	21	4	0	2	2	21
Greece	2	3	1	2	1	0	0
Spain	4	7	1	1	0	0	13
France	23	10	1	0	1	0	13
Ireland	0	0	0	0	0	0	0
Italy	10	5	1	3	3	0	10
Luxemburg	3	0	0	0	0	0	0
Netherlands	1	3	0	0	2	0	9
Austria	1	1	2	1	0	2	3
Portugal	2	1	0	0	0	0	2
Finland	2	1	0	0	0	1	1
Sweden	7	8	3	0	0	0	1
UK	4	0	0	1	0	0	5
TOTAL	71	66	15	10	9	6	81

Table 3: Complaints Concerning Obstacles to Trade in 1995

Source: European Commission

While many of these obstacles represent a non-application of the principle of mutual recognition or the continued insistence on national standards, they illustrate the continued restrictions on intra-Community trade. Several business federations in Europe have urged the European Union to push forward with a new white paper aimed at reducing regulatory barriers which continue to prevent a unified market.²⁵ Commissioner Monti, in charge of the internal market, has also expressed concern that there should be a "renewed commitment" to the single market to deal with the remaining obstacles. In addition, the Commissioner proposed an Action Plan that was presented to the European Council in Amsterdam in June 1997, aimed at addressing the need for action at the international level, notably within international standards and other quasi-regulatory bodies, to parallel the removal of barriers within the single market.

However difficult the challenges faced by European policies in practice, equally important for understanding US-EU relations is the impact that European efforts to remove barriers have had on American politics and corporate strategies.

Reaction and Reform: American Business Response to the European Challenge

The European initiative prompted a heightened awareness among American business of the critical role played

by standards. Shut out of the negotiations on European standardization, American firms were anxious not to suffer a competitive disadvantage in meeting European market entry requirements. American business was particularly concerned to increase the transparency of the European standard-setting process. The fears of American business leaders led to the proposal for an American seat at the European standard-setting table. They have now been replaced by a concern about the implications of European standards in shaping the international arena. The changing economic environment in Europe alarmed many business federations, especially in view of the European efforts to promote their European standards as international ones.

The promotion of European standards at the international level creates opportunities for European firms to "lock-in" third country markets. European firms can expand their market shares because European standardization not only affects trade prospects in Europe, but increasingly determines trading relations in the global market. Building on the relationship between standards and competitiveness, the European Union uses standards as both a marketing device and a means of technology transfer to sell its products in Eastern Europe and developing countries. The European Union and European standards bodies recognize that once a standard is in place, a trading relationship become locked in, and they have fostered extensive ties through foreign aid programs and other cooperative schemes to assist in the adoption of European standards. To stimulate trade, the EU and the European standards bodies have reinforced their position and interests by providing technical assistance to firms, governments and standards bodies in Mexico, Saudi Arabia and India, as well as to the ASEAN countries. European standards have been used by the EU as a component of industrial policy for greater political and economic leverage in the international arena.²⁶

In the United States, a flurry of congressional hearings raised questions about the effectiveness of a highly decentralized standard-setting system.²⁷ Unlike Europe, with national standards bodies that have centralized control over standards, it has been estimated that there are over 400 standards bodies in the United States. Though these include major bodies such as United Laboratories (UL), the American Society for Testing and Materials (ASTM), and the American Petroleum Institute, there are also a number of small specialized professional associations and industry federations that are involved in standard-setting. While many have argued that this pluralistic structure operates as efficiently and effectively as the centralized system in Europe, American policy-makers have been less sanguine about the ability of American standards-setting organizations to engage in coordinated collective action.²⁸

Initially reticent in responding to initiatives from the Commerce Department and US Trade Representative (USTR) to consolidate standards activities, business federations such as the Chamber of Commerce and National Association of Manufacturing realized that American firms needed to pay more attention to both the process and the structure of American standardization activities. Recognizing the impact of European efforts, American firms and policy-makers began working together on strategies to deal with the European challenge. A series of meetings comprised of a small group of industry officials produced a set of recommendations for the Commerce Department. Stressing that government and business should work more closely together in responding to the changes in the European regulatory environment, the report included a number of suggestions.²⁹ It concluded that the US should respond by:

- improving US companies' participation in standards-setting bodies outside the US;
- fostering increased coordination between American government officials and the private sector in order to respond effectively to both developments at the regional and international level; and
- improving negotiations with the EU to ensure that standards, testing and certification practices do not

become non-tariff barriers. Both the government and the private sector would be better placed in their negotiations if there was a lead agency or institution responsible for coordinating an American position *vis-a-vis* the European Union.

While American business has been resistant to any efforts to change the status quo, the recommendations clearly indicated that business leaders were open to greater business-government cooperation in dealing with the EU. Standards, testing and certification issues were clearly at the top of the American business agenda, and many firms were anxious to increase their effectiveness by promoting American leadership in international standards organizations such as the ISO, IEC, CCITT, and CCIR.

The United States has not traditionally seen the international standards organizations as a suitable arena for promoting domestic standards. American firms have argued strongly that there is little incentive for them to participate at the international level as the voting arrangements provide the EU and EFTA countries with a strategic advantage. With the growth of EU activity, however, many of the leading trade associations now advocate greater international participation by American firms. As one trade official noted,

"international standards still need more recognition by United States corporate political leaders. We see progress in moving standards from the backroom to the boardroom. However, many of our corporate leaders... still do not recognize the crucial effect international standards have on our competitive posture".³⁰

Equally important, the standards issue provides a window on the current debates over competitiveness and industrial policy. The concern expressed by policy-makers about the developments in Europe and the initial reluctance of business to work with government agencies reveals the strong divisions over the necessity for reform of standardization policies in the US. The US has been noticeably reluctant to pursue the same path in the US as the Europeans in using standards as a tool of industrial policy.³¹ However, a consensus is emerging that concerted action and government support are crucial in surmounting the obstacles faced by American business in meeting standards, testing and certification requirements. While European policy-makers suggest that their streamlined system will provide equal benefits to third countries, American firms have provided numerous examples of restrictions in marketing their products in Europe.³² Not only did the absence of standards in some sectors create tremendous business uncertainty, but many firms have complained – with mixed success – about the difficulties of penetrating the European market.³³

New areas of European standardization such as environmental management and eco-auditing, energy, food quality and safety, biotechnology and transportation standards could result in increased friction if American business feels unable to play any role in shaping the European debate. The Europeans argue that their efforts are compatible with international standards, and that American firms can influence the debate by participating more in the international arena. This has not reduced the concerns of American firms. In a number of cases, American firms have made it plain that they would ask for a complaint to be submitted to the World Trade Organization, if the standards in the European Union differ substantially from international standards.³⁴

Choosing to Negotiate: The Transatlantic Effort

American and European policy-makers have pushed for a deepening of the transatlantic relationship, recognizing that many of the problems facing the US and EU are better solved through cooperative action. In

the area of trade, motivation for a strengthened transatlantic partnership is based on the common perception that further trade liberalization can promote growth and create jobs. Both the New Transatlantic Agenda and the Transatlantic Business Dialogue have focused on identifying market access barriers and regulations that most impede US-EU commerce.³⁵

The New Transatlantic Agenda, signed by US president Bill Clinton, EU Commission President Jacques Santer, and EU Council President Felipe Gonzalez at the US-EU Summit in Madrid in December 1995, has received a great deal of attention. This effort to create a structured dialogue involves not only foreign policy initiatives, but also a more enhanced profile for trade relations. In their efforts to expand trade and investment opportunities, a wide range of collaborative projects were proposed. For business, the most significant issues addressed were those dealing with tariffs and non-tariff barriers. While the US and EU have recently forged a multilateral Information Technology Agreement in December 1996 to remove tariffs on a wide range of electronic projects, their bilateral cooperation has run into more difficulties in other areas. In particular, the mutual recognition agreements, considered a high priority in many sectors, have been stalled by problems in accepting mutually equivalent regulatory practices. Mutual recognition agreements do not involve harmonization; they require comparable confidence and trust in the product testing and approval procedures of another country. This would ensure a reduced regulatory burden as a product tested and approved in the US would not be required to undergo further product approval in the EU and vice versa.

Government-to-government negotiations over mutual recognition agreements have been hampered by a number of constraints. Perhaps most importantly, the different structures and orientations of the two regulatory systems have stalled negotiations. While the European system is increasingly centralized and speaks with "one voice" in negotiations, the regulatory regime in the United States has been criticized by European policy-makers as decentralized and pluralistic, with regulations often set by local, state and federal level agencies and standards set by hundreds of professional associations, industry federations, and trade associations. Responding to European complaints that the decentralization and multiplicity of organizations that are involved in standards and certification work make it difficult to ensure transatlantic "equivalence", American policy-makers have adapted their regulatory structure to the changing needs of international trade negotiations.

The adoption of the National Voluntary Conformity Assessment Evaluation Program (NVCASE) is an important step in business-government cooperation in the US. Government agencies will verify that testing and certification in the US meets certain quality standards, and in doing so will become more involved in private sector activities than in the past. NVCASE allows US regulatory agencies to assess the quality and testing and certification bodies in the US, so that they are "notified bodies" and thus equivalent to those operating under the EU's global approach – clear evidence that the European system has had some impact on the regulatory regime in the United States.

Business executives have not watched the government-government negotiations from the sidelines. Anxious to push forward and remove any remaining constraints on transatlantic trade, European and American business executives have sought to influence the debate through their involvement in the Transatlantic Business Agenda (TABD). Launched in November 1995, one month before the Madrid Summit outlining the New Transatlantic Agenda, the Transatlantic Business Dialogue (TABD) is an unprecedented venture in government-business partnership between the United States and the European Union. The TABD is a private-sector effort "designed to respond to the new reality of trade; namely that companies are functioning globally and their involvement in the making of international trade policy is a natural outgrowth of such globalization".³⁶ First promoted in 1994 by the late Commerce Secretary Ron Brown, it has become the vehicle through which business has identified and recommended the need for government action.

The business driven-agenda of the TABD has focused on standards, certification and regulatory policy. Recognizing that the existence of heterogeneous standards and duplicative regulatory requirements has added to the costs of doing business for American and European firms, the TABD established a Transatlantic Advisory Committee on Standards, Certification and Regulatory Policy (TACS) to formulate a sector-by-sector approach to dealing with these non-tariff barriers.³⁷ Industry representatives from both sides of the Atlantic in the automotive, energy, chemical, medical devices, pharmaceutical, telecommunications, and information technology sectors have agreed on a political commitment to remove costly and duplicative standards by promoting the mutual recognition principle, "approved once, accepted everywhere". A substantial report was issued by the TABD in May 1996 outlining specific policy recommendations from sectoral groups focusing on transatlantic standards and regulatory issues (TACS). This report was followed by the Transatlantic Business Conference in Chicago in November of 1996, where nearly seventy CEO's from a cross-section of American and European companie met with government officials to discuss issues identified as impeding EU-US commerce. The Conference represented the culmination of an intensive year-long effort by the TABD to create detailed recommendations for government action to act upon in the next US-EU Summit.

While there were high expectations that the US and EU would be able to conclude a package of mutual recognition agreements by the January 1997 deadline set by Commission President Jacques Santer and President Bill Clinton, intensive negotiations failed to resolve regulatory differences in the pharmaceutical sector. This held up progress on mutual recognition agreements in other sectors, including telecommunications, information technology and medical devices. The sectors under discussion comprise over 40 billion dollars in two-way trade, and agreement on the common recognition of testing and certification practices would save manufacturers and regulators substantial time and expense in bringing products into their US and EU markets.³⁸

The business community has followed the new forms of cooperation between the US and EU government closely, and has expressed a positive opinion that government negotiations will succeed in eliminating duplicative standards, testing and certification requirements. Because standards and certification issues demand greater attention than in the past, and have become a significant factor in external trade relations, the Transatlantic Business Dialogue has received requests from sectors such as biotechnology and aerospace to be included in the Transatlantic Advisory Committee on Standards and Regulatory Policy (TACS).³⁹ In spite of the delays in reaching some form of agreement on the first round of mutual recognition agreements, business clearly sees this as one of the most important issues on the TABD agenda. Business efforts have clearly had a positive impact on the trade liberalization process. By making their recommendations on a sector-by-sector basis, the business sectors involved have helped clarify the process for government-to-government negotiations. Such specificity is crucial, as different sectors are more knowledgeable about identifying those barriers to trade. In the automotive sector, a major transatlantic conference on Harmonization of Auto Regulations in April 1996 concluded that two of their major goals involved the "functional equivalence" of regulatory standards and certification practices. In electronics, telecommunications and information technology, more emphasis was placed on international standards for inter-operability and inter-connectivity in all information-related areas.

But despite efforts to increase cooperation to improve the competitive position of industry on both sides of the Atlantic, the mutual recognition agreements have been the subject of some criticism. Unlike the EU, the American regulatory process is based on rule-and-comment by interested parties and administrative procedures to ensure openness and transparency. Regulatory discretion is severely constrained by procedural requirements, such as the Administrative Procedures Act, and is subject to judicial scrutiny. Now that American policy-makers are involved in trade negotiations rather than simply domestic regulatory policy, public interest groups, labor and environmental organizations have expressed concern that public access has been undermined.

Additional problems about the transatlantic marketplace have also emerged within the regulatory agencies themselves. Testing and certification agencies on both sides of the Atlantic feel threatened by the regulatory changes taking place. Efforts by agencies such as the FCC and FDA to retain control over the certification and standards-setting process have led some industry critics to argue that it is necessary to change bureaucratic mind-sets. Fears expressed by regulatory agencies that mutual recognition agreements will lead to a loss of jurisdiction over regulatory policy have been a factor in delaying the implementation of these trade agreements. For this exercise in trade liberalization to work successfully, these difficulties need to be ironed out to ensure a high degree of political commitment. Part of the problem may be overcome if business on both sides of the Atlantic continues to pressure government negotiators to push forward with these agreements. The TABD - through the attention it has given to transatlantic standards and regulatory barriers - provides a good forum for setting priorities and pushing them onto the political agenda.

But the increased focus of bilateral negotiations on regulatory cooperation should not divert efforts and resources from trade liberalization at the international level. It will be important for US and EU policy-makers to continue to support multilateral efforts within the WTO. While the Tokyo Round in 1979 led to the conclusion of an agreement on Technical Barriers to Trade, adherence was voluntary. Though it established some basic principles such as transparency, non-discrimination and proportionality in the use of products standards and regulations, the Technical Barriers to Trade (TBT) Agreement, also known as the Standards Code, was considered weak and ineffective. The Code was substantially strengthened and made binding on all members of the World Trade Organization following the completion of the Uruguay Round in 1994.

The new Code strengthens the test of proportionality, requiring members to regulate products in the least trade restricting way possible. It limits the use of standards at federal, state and local levels so that they are not used for protectionist purposes. At the same time, the new Code addresses the significant impact that different standards and product approval processes can have on trade by encouraging members to negotiate mutual recognition agreements. However, trade disputes between the US and EU over the "mutual equivalence" of standards will not be easily resolved. The EU's import ban on hormone-treated US beef, the dispute over EU hygiene standards for meat and poultry, and the EU's complaints about US fuel economy standards for cars have all highlighted the growing tension between trade and differences in consumer welfare standards. Equally importantly, they have illustrated the growing role played by the WTO's dispute settlement mechanism - rather than unilateral sanctions - in resolving these trade-related standards conflicts. If the US and EU work within this multilateral framework, the benefits of mutual equivalency of regulatory standards could represent a new framework for dealing with non-tariff barriers at the global level.

A New Model of Trade Liberalization?

Some policy officials have suggested that US-EU transatlantic efforts at regulatory cooperation could be used as a model for trade liberalization. As more and more countries introduce new products standards and regulatory requirements, oftentimes in response to demands for health, safety and environmental protection, governments are searching for new solutions to the resulting trade conflicts created by their divergent regulatory policies. Despite the efforts of international bodies to develop globally applicable standards and requirements, many firms concede that the proliferation of national standards indicates that the problem shows little sign of receding. US-EU efforts at economic cooperation have, however, provided an important jump start to other regional efforts at tackling technical barriers to trade. Currently, a number of other regional groupings including Australia and New Zealand via their Closer Economic Relations Agreement, NAFTA, ASEAN, the Gulf Cooperation Council, Mercosur, and the Central European Free Trade Area (CEFTA) all plan to introduce forms of mutual recognition, once a common regulatory framework has been established. European and American bilateral efforts may provide lessons to these regional trade blocs.

However, using the transatlantic initiatives at regulatory cooperation as a model should also highlight the difficulties and protracted negotiations involved in creating a transatlantic marketplace. While the US and EU have a long standing commitment to standards, testing and certification, many other efforts in developing countries are still at the nascent stage. The US government has urged many APEC states to adopt more open trade practices, develop comprehensive testing and certification systems and create a framework in which foreign business receives the same treatment as local business. However, the United States lags behind EU efforts to provide technical assistance programs with its numerous trade partners, including Central and Eastern Europe, Russia and the CIS, Latin America, Asia, and the ACP countries. The EU is much more involved in assisting developing countries to develop a standards infrastructure that not only facilitates trade but also encourages the adoption and use of European standards.⁴⁰

Simply pushing for a framework for harmonized standards and common testing and certification arrangements, based on existing multilateral agreements on technical barriers to trade such as the World Trade Organization (WTO) and World Health Organization (WHO), through APEC may not be sufficient. If the US does not opt for a more aggressive industrial policy to promote its own standards within APEC countries, it may find its trade objectives undercut by the EU.

In addition, if the US and EU have faced a number of roadblocks in their efforts to reach agreement on mutual recognition agreements, then the conflicting values and interest of APEC states will also inspire support for and opposition to regulatory-related trade agreements. The US-EU experience should also caution those interested in Asia-Pacific liberalization, that high expectations could result in frustration if few tangible results are achieved quickly. The process is a slow, time-consuming one in which mutual recognition of standards and certification will only be achieved if there is a great deal of mutual trust and comparability.

Conclusion

Bilateral negotiations on standards and regulations represent a new phase in US-EU relations. Despite being overshadowed by the recent dispute over Helms-Burton, the momentum created by active engagement and dialogue between US and European business and government has produced an environment in which key issues of transatlantic trade and investment are being addressed.

Considerable progress has been achieved in addressing many of the barriers that continue to impede transatlantic commerce. These efforts have increased transatlantic contacts and meetings between both business executives and policy-makers. While much attention has focused on mutual recognition agreements that will ease regulatory burdens in certain sectors, these are "high risk" products where supervision is in the hands of government agencies such as the Food and Drug Administration, the Environmental Protection Agency and the Federal Communications Commission.⁴¹ More attention needs to be given to the private standard-setting process in transatlantic negotiations, especially as the EU has made it clear that it intends to increase the role of European standardization in fostering market integration. Increased dialogue between European and American standards bodies as well as the exchange of information on prospective standards has done much to ease American anxiety about the transparency and openness of the European standards setting process.

Although American multinationals with operations in Europe are in a much better position to be able to respond and react to European standardization efforts, American firms exporting to Europe are faced with possible changes that may alter the traditional way in which they have conducted business in Europe. New standards can cause an upheaval in the market, and corporate strategies as well as production processes are affected by the new rules and market entry requirements in Europe in an increasing number of industrial sectors.

While there is a willingness on both sides of the Atlantic to address many of the recommendations outlined by the working groups and sectoral groups of TABD, some of these initiatives will take years to achieve some form of mutual accommodation and agreement. The growing concern among states and industry over the propensity of standards and certification issues to present trade obstacles shows no sign of receding. In the meantime, negotiators are pushing on with efforts to coordinate standards and reduce duplicative testing in an effort to remove some of the most important - but often underestimated - barriers to transatlantic trade.

Postscript

In June 1997, the US and EU signed a draft trade pact on mutual recognition agreements. American negotiators sought to exclude the Food and Drug Administration from the agreements due to concern over differences in regulatory standards. The EU insisted that the agreement be concluded for all sectors concurrently, otherwise it would face opposition from some member states in the ratification process. Since the initial discussions in June, the US has agreed to meet European demands and include all sectors as part of a mutual recognition agreement. The MRA agreement, covering pharmaceuticals, medical devices, telecommunications and electrical equipment, electromagnetic compatibility and recreational crafts, represents a major success for business executives involved in the TABD.

NOTES

- 1. Nomenclature in the standards area is complex. Standards produced by non-governmental actors are often termed "voluntary" standards; standards produced by state or federal government activity are classified as "mandatory". However, many voluntary standards are adopted or incorporated by "reference" into government legislation, thereby becoming mandatory even though they have been developed by private, non-governmental standards bodies.
- 2. See US Department of Commerce Subcommittee on Europe, White Paper, November 1995.
- 3. The New Transatlantic Agenda is centered on a Joint Action Plan that includes cooperation to promote peace and stability; response to global challenges; support for the World Trade Organization (WTO) and the creation of a Transatlantic Marketplace; and the building of bridges across the Atlantic, assisted by the Transatlantic Business Dialogue.
- 4. Robert Baldwin, *Non-Tariff Barriers to Trade* (Washington DC, Brookings Institution, 1970).
- 5. The intense competition in the consumer electronics industry with regard to video cassette recorders (VCR) is an important example. Philips V2000 (Beta) system gave way to the Japanese Video Home system (VHS) which became the de facto world standard.
- 6. The US-Japanese trade relations is replete with examples in which the conformity assessment process in Japan has been a major obstacle to the efforts by US manufacturers to gain market access. Much less has been written about EC-Japanese relations in this area. See Peter B. Edelman, "Japanese Product Standards as Non-Tariff Trade Barriers: When Regulatory Policy Becomes a Trade Issue" *Stanford Journal of International Law* Vol 24, 1988: 389-446.

- 7. Michelle Egan, "Assessing Quality: Testing and Certification in the European Market" Presentation at the European Business Opportunity Conference, Department of Commerce, Pittsburgh, April 1994.
- 8. David Vogel, "Regulatory Cooperation Between the European Union and the United States" Paper presented at the AICGS-ECSA Conference on US-EU Relations, January 1997.
- 9. In the case of telecommunications equipment, for example, different standards and highly costly and complex testing requirements have served to limit the strategic response of many European firms to increased competition. With seven different digital technologies in the European countries developed under protected public purchasing arrangements, these segmented national markets have served to foster higher cost margins, and prevented European firms from forming major collaborative agreements to increase their global competitiveness.
- 10. See Eric van Puyvelde, *Industry and the Battle for the EEC's Internal Market* (Agence Europeene d'information, Brussels, 1983); *The EEC As an Expanded Home Market for the United Kingdom and the Federal Republic of Germany* (The Anglo-German Society for the Study of Industrial Society), 1979).
- 11. Official Journal C136 4, July 1985; see also G.M. Strawbridge, "The New Approach to Technical Harmonization and Standards" British Standards Institute: 2, No Date.
- 12. The EU has pushed testing and certification agencies to seek assurance that they meet certain international standards. American firms have found themselves under pressure to meet these international standards, known as quality management standards, since this will make it easier for American firms to demonstrate that they meet the same international standards that European testing and certification agencies use in assessing products to be sold on the European market. See Egan, *op cit.*
- 13. CEN is the Comitè en Normalisation, CENELEC is the Comitè en Normalisation Electrotechnique, and ETSI is the European Telecommunications Standards Institute.
- 14. The national standards bodies differ in terms of policy style. Following the dominant role of the state in French politics, French standardization efforts were linked directly to the Ministries of War, Commerce, Public Works and Labour. By contrast, standardization in Germany and Britain emerged through negotiations among different key economic interest groups and is much less tied to the state.
- 15. Telematics comprises semiconductors, computers, and telecommunications. See Framework Programme of Community Activites in the field of research and development; subheading "Development of telematic systems of general interest" COM 90/221/Euratom, EC OJ 117, 8 May 1990.
- 16. ETSI, "ETSI Meets the Challenge" 4 April 1991.
- 17. Interview, British standardization official, London.
- 18. Voting is weighted with a total of 96 votes. Four requirements must be met: a) simple majority (no abstentions); b)at least 25 votes in favor; c) no more than 22 votes against and d) no more than three national standards bodies against. Information provided by CEN Secretariat, Brussels.
- 19. *Official Journal*, C 96, 25/4/92 p.2
- 20. *Official Journal*, C 173 9/7/92 p.1.
- 21. Difficulties have arisen in sectors such as machinery and building materials, as well as standards that cut across broad swathes of industry such as environmental standards for recycling, life cycle analysis, and noise emissions.
- 22. See Commission Staff Working Paper, "Report on the Progress of European Standardization", Brussels, 28 November 1995, SEC (95) 2104.
- 23. In its most recent survey of business, the EU found that 35-50% of respondents in key product sectors regard technical harmonisation and mutual recognition measures as effectively overcoming technical barriers. Communication from the Commission to the European Parliament and Council, COM (96) 520 Final, October 30, 1996.
- 24. European Commission, "Report on the Progress of European Standardization", SEC (95) 2104.
- 25. Unice, the Confederation of European Business has pushed for increased European activity in a number of areas including taxation, company statutes, standards, and public procurement. See UNICE, "Releasing Europe's potential through targeted Regulatory Reform" (1995).
- 26. John Hayes, "Who Sets the Standards ?" *Forbes Magazine* April 17, 1989: 111-112.
- 27. See Hearings before the Subcommittee on Europe and the Middle East and On International Economic Policy and Trade, Committee on Foreign Relations, February 23, April 5, April 13, May 10, May 11, 1989.

- 28. See Office of Technology Assessment (OTA) *Global Standards* (Washington DC, 1992).
- 29. Report to the Secretary of Commerce of the Federal Advisory Committee on the EC Common Approach to Standards, testing and Certification in 1992.
- 30. Sergio Mazza, ANSI President, Testimony Before the House Subcommittee on Technology, Environment and Aviation, 101 Congress, Second Session, September 22 1994.
- 31. Office of Technology Assessment, *Global Standards*, (Washington DC, 1992).
- 32. The dispute over meat and poultry standards is the latest example of the lack of mutual equivalence of hygiene laws, which has led the EU to require American food exports to carry certificates of compliance with EU standards. The US lobbied by producers in thirteen states has said it is unable to issue such export certificates and was taking retaliatory measures. See, "US and EU take poultry hygiene row to new level" *Financial Times*, April 2, 1997.
- 33. See "Hitting a Wall: US Firm's Troubles in EU Highlight A Lack of Integration", *Wall Street Journal*, 9 April 1996; "Stacking the Deck in Europe: One Company's Story", *ASTM Standardization News*, August, 1996.
- 34. This is especially the case regarding environmental management standards where American firms have been extremely reluctant to follow the European model of disclosure of environmental audits. They fear that such disclosure could be used against them within the more aggressive American legal and regulatory system. American firms argue that they do not need more disclosure than is already in place; they already face a comprehensive checklist of environmental assessments and audits under Environmental Protection Agency regulations.
- 35. Matthew Breitfelder, "The Transatlantic Business Dialogue: Chicago Conference Exceeds Expectations and confirms the TABD as a Major Force for a More Open Transatlantic Market" *Business America*, November 1996.
- 36. Selina Jackson, "The TABD: An Entrepreneurial Force Behind the New Transatlantic Agenda" *ECSA Review*, Fall 1996, Vol IX no 3, p.21. For a description of TABD's origins, see Maria Green Cowles, *International Executive*, December 1996.
- 37. See Paula Stern, "The Transatlantic Business Dialogue: A New Paradigm for Standards and Regulatory Reform Sector-by-Sector" Paper prepared for Council on Foreign Relations, 1996.
- Matthew Breitfelder, "The Transatlantic Business Dialogue: Chicago Conference Exceeds Expectations and confirms the TABD as a Major Force for a More Open Transatlantic Market" *Business America*, November 1996.
- 39. TABD Letter to the US-EU Senior Level Group, January 27, 1997.
- 40. See Communication from Commission, "Community External Trade Policy in the Field of Standards and Conformity Assessment" November 11, 1996. Annex 1.
- 41. Paula Stern, op cit.