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The Impact of Standards on Corporate Profitability A Summary of Research Conducted by ASTM International

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Standards have a positive impact on corporate profitability. Companies that use standards and individuals involved in standards development will tell you that this statement is intuitive. After all, standards facilitate trade, conformity assessment, safety, efficiency, cost containment, market access, quality control, product design and planning, marketing, technology transfer... the list goes on. However, trying to prove the hypothesis of the positive impact of standards and actually demonstrating the impact of standards with financial data is an elusive task.

Background

In October 2004 the ASTM International board of directors assigned staff the task of researching the impact of standards on corporate profitability. By mid-2005 a request for proposal had been drafted and issued; it stated two objectives for the research:

- Demonstrate, in an empirically compelling way, the economic contribution that consensus standards make to a firm's ability to generate profit; and
- Demonstrate the value of participating in the development of standards.

ASTM decided to conduct the research in two parts. The first component was qualitative and was intended to identify the key benefits and positive impacts of standards. This information would then assist in developing the quantitative component of the study. Two researchers were selected for the project — The University of Texas at Austin's Center for Electromechanics and Market Measurement Inc. UT Austin performed the qualitative research and Market Measurement conducted the quantitative component.

Qualitative Component

This qualitative study focused on the impact of standards participation as identified by participants in the standards development process. It aimed to document the expected benefits, costs, risks of standards participation versus "wait and see" strategies and the information industry uses in standards participation decisions.¹

Since ASTM International develops standards for over 90 industry sectors, it was necessary to focus the study on selected sectors. Working with ASTM staff, UT Austin researchers identified six sectors in which to conduct its research: non-ferrous metals, petroleum, plastics, consumer products, construction and medical devices. The researchers carried out semi-structured phone interviews with a random selection of ASTM International members. It was thought that members would have specific knowledge of both the impact of standards and how standards benefit their respective companies. Thirty interviews were conducted with individuals from multinational companies representing producers, laboratories, instrument makers, regulators, academia, trade or industry associations and consultants.

Findings of Qualitative Study

At the corporate level, long-time participating companies in ASTM standards development are convinced, to the point of not requiring verification, that being an active participant in the standards process is not only cost-

justifiable on the grounds of operational efficiency and market share, but that such activity is a sine qua non requirement for market entry and successful competition in their sectors.¹

In other words, participation in standards development is an indispensable and essential condition for market entry and successful competition.

Another finding was that the decision to participate in standards development activities is generally decentralized at the individual level, though at times this decision is made with input from management and various departments. The benefits of participation were seen as long-term strategic variables, but the direct costs were perceived as significantly inferior to the indirect costs and risks of non-participation.

Interestingly, the qualitative research also identified a number of benefits of standards that were common to the six sectors that were evaluated. Common cross-sector benefits of standards include:

- Maintaining product quality, reliability and performance;
- Ensuring interoperability of products with one another;
- Improving market access;
- Developing consumer confidence;
- Managing regulatory and liability risk; and
- Ensuring that new standards or revisions are compatible with the firm's product.

These benefits were used in developing the second, or quantitative, portion of the research study.

Quantitative Component

For the quantitative portion of the study, Market Measurement Inc. worked with ASTM staff to develop a profile of the type of organization and individual within an organization to be interviewed. ASTM International identified industries that were most likely to be users of standards. Two hundred fifty calls were made to a sample of companies with 10 or more employees within the ASTM-identified group of industries.

Participating companies and individuals were required to meet two criteria. The company must have a corporate executive (chief executive officer, chief operating officer, president — “C-level executives”) within the organization or have management level job titles in which the study participant represented one of the departments, or functional areas, most likely to use standards. The individual interviewed must have a moderate or high level of familiarity with standards. (At the beginning of each interview, a definition of the word “standard” was provided to facilitate a consistent understanding across interviews.) The profile of completed interviews is provided in [Figure 1](#).

The research by MMI provided the following key findings:

w Impact of the use of standards: More than three-quarters of study participants described standards as having a “high impact” on their organization. This proportion increased to virtually all study participants when including those suggesting that standards have at least a “moderate impact.”

• Overall attitude toward standards: More than two-thirds of all C-level executives, as well as technical executives, maintain a “very favorable” attitude toward standards. Some specific comments made about the impact of standards included:

- Standards set the direction for everyone in our company.
- Standards simplify the design and manufacturing process.
- Standards keep the market on a level playing field.
- Standards provide the ability to measure performance.
- We use standards because we are looked upon as producers of high quality products.
- We entered into markets where other competitors could not meet the standards.
- Evaluation of specific attributes of standards: Executives were asked to rate their sentiment toward standards

when considering eight specific evaluation criteria. The proportion of “very favorable” ratings was highest when considering:

- Improving customer receptivity by using standards;
 - Enhancing product quality/performance; and
 - Serving as a resource for product liability challenges.
- There was also broad-based support (i.e., at least 93 percent “very” or “somewhat favorable”) when considering:
- Contributing to interoperability;
 - Enhancing coordination with suppliers/customers;
 - Facilitating market access;
 - Supporting product development; and
 - Enhancing technology transfer. (See [Figure 2](#).)
- Some of the verbatim comments about the impact standards can have on profitability included:
- Standards help eliminate unknown and unanticipated costs.
 - Having the knowledge that there are standards helps us avoid wasting time and money discussing what we need to do.
 - Standards reduce the likelihood of product rejection by the customer.
 - Standards enable us to use our technology more efficiently, so we don’t waste money.
 - Without standards we could not do international business.
 - Standards influence quality and cut production time.

Conclusions

Regarding companies’ efforts to determine the return-on-investment for standards, MMI’s findings were consistent with the qualitative results from UT Austin. Specifically, only 7 percent of the corporate executives and 18 percent of the technical executives indicated that such an attempt is made. Ninety percent of the corporate executives and 88 percent of the technical executives rate the return-on-investment of participation in standards development as high or moderate, but no specific financial information is available. Of those interviewed, 54 percent of the corporate executives and 52 percent of the technical executives said that their organizations participate directly in standards development.

The fact that data is not collected by most companies on the benefits of standardization should probably not come as a surprise. For more than a century, standards have been the building blocks of manufacturing and trade, as well as aids to safety, quality control, environmental protection and best practices. In that time, it would seem that the wisdom of participating in their development has become an unspoken code among the most forward-thinking in myriad industry sectors.

We are pleased to have been able to compile and quantify — to whatever extent possible — the many reasons companies turn to standards developing organizations such as ASTM International to ensure that the benefits of standards outlined in this study accrue to all who participate in commerce around the world. The ASTM staff also expresses its gratitude to the individuals who participated in this research study. It would not have been successful without their input. //

Reference

1 Impact of Standards Development Participation on Companies, Final Report, January 31, 2007, The University of Texas at Austin.

Figure 1: Profile of Completed Interviews

Figure 2: Impact of Standards on Various Issues

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