



Economics of Standards

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World Trade Report on standards

- ◆ Report is about the link between product standards/technical regulations and trade
 - ◆ What economic functions do standards perform?
 - ◆ Do standards/technical regulations hinder trade?
 - ◆ How well have WTO agreements on standards (Technical Barriers to Trade Agreement and Sanitary and Phytosanitary Agreement) and jurisprudence done to ensure that standards do not become obstacles to trade?



Why standards are important

- ◆ In biblical times, the lack of a common (standardized) language wreaked havoc at the Tower of Babel
- ◆ During the great Baltimore fire of 1904, fire fighters called in from neighbouring cities were unable to fight the blaze effectively because their hoses would not fit the hydrants in Baltimore



Use of product standards

- ◆ Increasing use of product standards
 - ◆ ISO –14,900 standards
 - ◆ Perinorm – 650,000 standards
- ◆ Wide range of institutions are involved and standards address many needs
 - ◆ Industries, governments, non-governmental organizations
 - ◆ Compatibility, safety, environmental protection, social responsibility
- ◆ Causes of these trends
 - ◆ Technological change, rising incomes, global integration



What economic functions do standards serve?

- ◆ Necessary to allow exchange between anonymous economic agents
- ◆ Ensures compatibility of products
- ◆ Associated with diffusion of technology
- ◆ Solves coordination problem in the case of network externalities
- ◆ Can solve important market failures
 - ◆ Imperfect information
 - ◆ Negative externalities



Standards underlie market exchanges

- ◆ Exchange between anonymous economic agents require more than trust
- ◆ Standard form part of the fabric of institutions (e.g. legal system that protect property rights) that underpin markets
- ◆ Product standards function to ensure buyers' expectations are met:
 - ◆ Weight, size, quality, taste, etc.



Compatibility

- ◆ Many modern products are built from dozens, hundred or even thousands of parts (automobiles)
- ◆ Globalization has resulted in specialization and fragmentation of production
 - ◆ Many specialist firms supplying components
 - ◆ Production chains spread around the globe
- ◆ Standards represent an important tool to coordinate the supply chain and ensure compatibility of the final product



Network externalities

- ◆ Network externalities
 - ◆ Products generate a value to users only if they are consumed together with other users (e.g. telecommunications network)
- ◆ Markets may result in many networks that are too small
 - ◆ Social benefits exceed private benefits of joining a network
- ◆ Benefit of an agreed standard
 - ◆ Optimal-sized network
 - ◆ Interoperable networks



Information asymmetry

- ◆ Producers know more about the quality or safety of their products than consumers
- ◆ Markets may not provide sufficient incentives for producers to be truthful/honest
- ◆ Governments often use standards as a way to ensure quality or safety of products
 - ◆ e.g. car safety, food safety, pharmaceuticals



Negative externalities

- ◆ Actions taken by consumers/producers have unintended negative consequences on others
- ◆ The absence of a market to “internalize” negative effects lead to lower welfare
- ◆ In the case of environmental damage
 - ◆ Economists generally favour a pigouvian tax
 - ◆ But many governments employ regulations/standards, e.g. emission standards, standards on energy efficiency



Effect of standards on trade

- ◆ Welfare effects of standards – **complex**
- ◆ Trade effects
 - ◆ Compatibility standards – **positive**
 - ◆ Safety standards – **ambiguous**
 - ◆ Environmental standards – **ambiguous**
- ◆ Two competing effects:
 - ◆ Raises costs
 - ◆ Increases attractiveness of goods



A diagram

Price

