

Environmental and safety regulations

Environmental regulations comprise different areas including pollution and air emissions; energy conservation; wastewater and water quality; water conservation; hazardous materials management; noise; contaminated land; etc. Health and safety regulations are generally concerned with workplace safety to protect the health and well-being of employees and the community, including a diverse set of areas including facility design and operation; fire safety; chemical, biological and radiological hazards; disease prevention; traffic safety; emergency preparedness and response; personal protective equipment; etc. The Environmental, Health, and Safety Guidelines of the International Finance Corporation (IFC) provide a useful compendium of good international practices accompanied by industry specific guidelines.

Environmental and safety regulations can encourage innovation and influence the direction of technological change, driving firms explicitly towards the development and use of innovative technologies which protect the environment or result in higher standards of safety (Kemp, 1998). These regulations have acted as a catalyst for the emergence of new products, services and industries, leading sometimes to the emergence of completely new markets. In addition, new environmental regulations have accelerated the need to replace old machinery and equipment, resulting in a faster introduction of new production techniques in industry with beneficial impacts on productivity growth that span beyond the original environmental and safety goals. In this way environmental and safety regulations may have a positive impact on both product and process innovation, in addition to their direct impact in addressing negative externalities of production. It is, however, difficult to know about aggregate effects because specific types of regulations will have different kinds of impacts on innovation (Rennings and Rammer, 2011).

On the negative side, it has also been argued that ambitious environmental and safety regulations may restrict firms in their innovative activities and cause high compliance costs which can hamper their international competitiveness. Notably, the increasing demands of environmental and safety regulations can restrict the capacity of companies in developing countries to export their products and integrate in global value chains because of an inability to identify the relevant requirement or to implement the regulations (Rotherham, 2003). Addressing the negative impact of this kind of technical barriers to international trade has thus become a topic for international discussions.

According to Porter and van der Linde (1995), environmental regulations may be challenging the competitiveness of national industries in the short term, but in the medium to long run they help improve international competitiveness and increase exports of the technologies that are developed to comply with those regulations. The influence of environmental regulations on firms' competitiveness also depends on the extent to which firms in other countries are subject to similar regulations, hence the importance of multilateral efforts to reach common regulations.

References

- International Finance Corporation (IFC), "Environmental, Health, and Safety Guidelines", www.ifc.org/ehsguidelines [1]
- Kemp, R. (1998), "Environmental regulation and innovation: key issues and questions for research", in Leone, F., Hemmelskamp, J. (Eds.), "The Impact of EU Regulation on Innovation of European Industry", European Commission, IPTS: Seville, pp.12-39. [ftp://ftp.jrc.es/pub/EURdoc/eur18111en.pdf](http://ftp.jrc.es/pub/EURdoc/eur18111en.pdf) [2]
- Porter, M.E., van der Linde, C. (1995), "Toward a new conception of the environment-competitiveness relationship", *Journal of Economic Perspectives* 9: 97-118.

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- Rennings, K., Rammer, C. (2011), “The impact of regulation-driven environmental innovation on innovation success and firm performance”, Industry and Innovation 18: 255-283.
 - Rotherham, T. (2003), “Implementing environmental, health and safety standards, and technical regulations: the developing country experience”, TKN Thematic Paper, International Institute for Sustainable Development, http://www.iisd.org/tkn/pdf/tkn_standards.pdf [3]

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