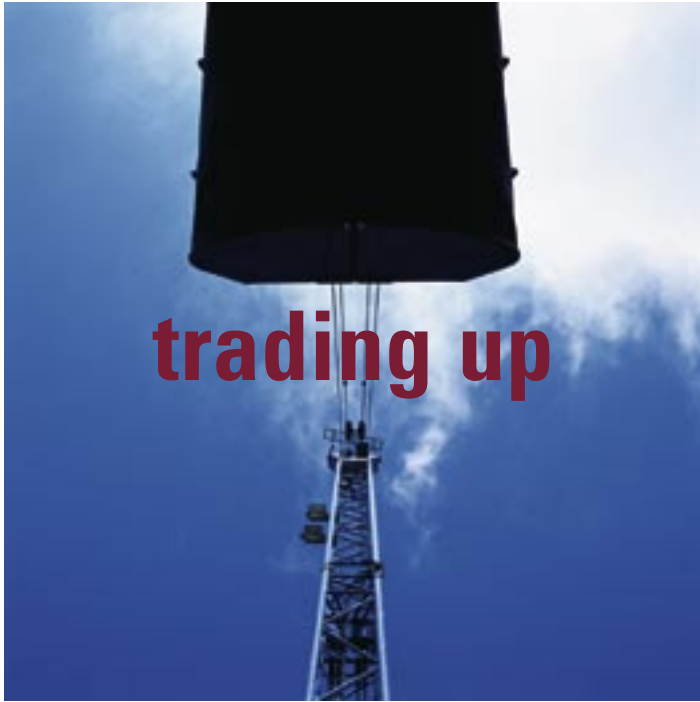




Globalization and ISO 14001



by Aseem Prakash and
Matthew Potoski

Does globalization spur a “race to the bottom”, in which countries relax their environmental regulations in pursuit of foreign trade? The authors use the results of a study of 108 countries to suggest the opposite – that international trade actually encourages progressive environmental practices like ISO 14001 implementation, particularly in developing countries.

1) This article is an abridged version of “Racing to the Bottom? Trade, Environmental Governance, and ISO 14001”, *American Journal of Political Science*, 2006, 50(2), pp. 347-361. The authors gratefully acknowledge the permission of Blackwell Publishing. For the unabridged version, including a description of the methodology used by the authors in their research, see:

<http://faculty.washington.edu/aseem/iso-ajps.pdf>

2) *The ISO Survey of Certifications – 2004*, <http://www.iso.org/iso/en/prods-services/otherpubs/pdf/survey2004.pdf>

Critics of globalization argue that international trade spurs a “race to the bottom”¹⁾, in which countries weaken their environmental regulations in pursuit of foreign investment and trade.

Our research suggests the opposite can occur – international trade can help spread progressive environmental practices, such as those spec-

ified in ISO 14001, if a country’s major export markets have adopted the international environmental management system (EMS) standard.

This is good news for the environment because developed countries, which absorb most of world’s exports, also have high levels of ISO 14001 adoption. Europe, Canada, Japan and the United States account

for about three quarters of all ISO 14001 registrations while absorbing about two-thirds of the world’s exports²⁾.

ISO 14001 is an example of a process standard because it governs how firms manufacture products rather than the products themselves. Interestingly, the World Trade Organization (WTO) disallows member governments from

imposing process standards on imports.

Environmentalists argue that the WTO undermines domestic regulations because imports from countries with laws based on lax process standards (and therefore lower production costs) can flood countries with more stringent standards.

The WTO, however, does not prevent private sector organ-

izations or industry groups from requiring their international trading partners to adopt process standards. Thus, firms can, and do, require their foreign suppliers to implement ISO 14001. For example, the US auto industry requires first and second tier suppliers, many of which are located abroad, to adopt ISO 14001.

The use of the EMS standard as a business requirement is an important development because more than half of the world's trade occurs between companies and their suppliers³⁾.

networks should have lower levels of ISO 14001 certification.

Their argument is that trade may create disincentives for firms to adopt ISO 14001 voluntarily because it may increase

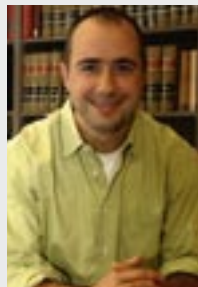
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Resolving the debate

Our hunch is that because most multinational corporations are headquartered in and closely tied to countries with high ISO 14001 adoption rates, they are more likely to encourage their suppliers to become ISO 14001 certified.

Since such countries also absorb the bulk of world exports, then trade could be a vehicle for encouraging ISO 14001 adoption around the world, particularly in developing countries.

There is a plausible counter argument to this optimistic scenario. If critics of trade and globalization are correct, countries that are more integrated with global trading

production and management costs, thereby raising the price of exports.

Our research sought to resolve these debates empirically through an analysis of ISO 14001 adoption across 108 countries between 1996 and 2002. The key hypotheses we tested were the following:

1. ISO 14001 adoption rates are lower in countries that are more dependent on exports;
2. ISO 14001 adoption rates are higher in countries whose major trading partners have high levels of ISO 14001 certification.

³⁾ UNCTAD 1996. *World Investment Report*. Geneva: UNCTAD.

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Influences on ISO 14001 adoption

Although trade is the primary variable, our analysis considered the following additional political, economic and social factors that might influence varying levels of ISO 14001 adoption across countries.

Foreign direct investment (FDI), may influence ISO 14001 certification. Globalization critics suggest that FDI assists environmental races to the bottom, while international business scholars counter that such races are rare because multinational corporations seldom base their FDI location decisions on environmental costs alone.

Critics of globalization argue that international trade spurs a 'race to the bottom'

Companies may be more likely to implement ISO 14001 if they are located in countries that are more embedded in international inter-governmental organizations (IGO's) and international non-governmental organizations (INGO's) and in cultural networks that transmit such the international standards to which these organizations adhere.

Thus, awareness of the responsibility of business towards the natural environment is likely to be more pronounced in those culturally similar countries with common language or countries in geographical



proximity. After all, managers are likely to take cues on appropriate corporate behaviour by observing other managers with whom they have cultural affinities.

Companies view the value of ISO 14001 certification in terms of its fit with their domestic context. Competitive market economies can compel firms to differentiate themselves on a variety of counts, including environmental stewardship.

ISO 14001 adoption rates may be higher in countries with more open economic systems. Likewise, if the demand for environmental amenities rises with personal wealth, ISO 14001 adoption rates should be higher in wealthier countries, where EMS implementation would signal an organization's commitment to safeguarding the environment.

In addition, public perception of environmental quality may be influenced by the level of polluting emissions in a coun-

try. When levels are high, citizens are likely to demand that governments and firms adopt policies to curb pollution⁴.

Results

International trade influences ISO 14001 adoption through bilateral trade linkages only. Countries whose export destinations have higher levels of ISO 14001 certifications have higher certification levels themselves (Hypothesis 2). Thus, overall dependence on trade per se does not affect a company's incentive to adopt ISO 14001 (Hypothesis 1).

Our study, therefore, strongly supports Vogel's "California Effect"⁵ – *if export destinations support ISO 14001, then firms in exporting countries are more likely to implement the EMS standard*. What matters in terms of the level of ISO 14001 adoption is not *how much* you export but *who* receives your exports.

This finding has important policy implications. Trade

critics fear that developed countries are likely to dilute their environmental laws to remain competitive with exports from developing countries that have weaker regulations themselves.

Given that the bulk of developing country exports are absorbed by developed countries that have relatively stringent environmental laws and high levels of ISO 14001 adoption, our analysis suggested that trade creates at least some incentive for firms in developing countries to adopt systems in compliance with domestic environmental policies.

The use of the EMS standard as a business requirement is an important development

Thus, trade can be an instrument for ratcheting up the environmental practices of firms in developing countries – specifically those that export to developed countries whose domestic industry has adopted progressive environmental policies.

The analyses also indicated that pressures to adopt ISO 14001 flow not just through

4) On the question of whether ISO 14001 encourages organizations to pollute less and demonstrate superior compliance with domestic environmental law, see Aseem Prakash and Matthew Potoski, 2006, *The Voluntary Environmentalists: Green Clubs, Environmental Governance and ISO 14001*, Cambridge University Press.

5) Vogel, D. 1995. *Trading Up*. Harvard University Press, Cambridge, MA.

trade linkages, but cultural and sociological ones as well. The statistical significance of the international sociological network variables (IGO's and INGO's) is mixed.

While the INGO variable is significant and is positively associated with ISO 14001 adoption, the IGO variable is not significant, perhaps because ISO 14001 is a non-governmental standard. Thus, the analysis suggests that international non-governmental networks are important conduits for the ideas and norms embodied in ISO 14001.

Countries with high numbers of ISO 9001 certifications also have high numbers of ISO 14001 certifications, most likely because these standards share a common management system approach.

Managers are likely to take cues on appropriate corporate behaviour by observing other managers

We also found that the relationship between wealth (*per capita* GDP) and ISO 14001 certifications was non-linear. Thus, while ISO 14001's attractiveness increases with a country's wealth, its appeal for the wealthiest countries, such as the United States and France, tends to decline. Our findings showed that other domestic variables – government consumption, GDP, manufacturing, regulation, and pollution levels – were not significant.

We also examined whether our results reflected the special case of the European Union (EU) – a leader in environmental policies. Given that the EU countries have been in the forefront of ISO 14001 adoption and are highly integrated via trade, our results could be driven by an “EU effect.”

Re-running the analysis without the EU countries showed essentially the same result, suggesting that our conclusions regarding the effect of trade on ISO 14001 were not driven by a dominant “EU effect.”

We adopted the same logic to check for a “Japan effect” given that Japan leads in ISO 14001 adoption and is highly integrated in the world economy, with essentially similar results.

Conclusion

Environmental groups argue that international trade leads to a race to the bottom as developing country exporters exploit allegedly less stringent domestic environmental standards to capture markets in developed countries.

They also argue that governments in developed countries are likely to come under pressure from their constituents to level the playing field by diluting domestic environmental laws.

Our analysis suggested that while high levels of trade may not significantly affect a company's decision to implement ISO 14001, trade can be a vehicle to promote ISO

14001 if key export markets have widely adopted it. Thus, importing countries are influencing organizational practices in the exporting countries, not *vice-versa*.

From this perspective, international trade has significant implications for public policy and business strategy. Access to international markets can serve as an important instrument to encourage the diffusion of preferred governance models and organizational practices.

tutions that lower trade barriers do not deserve opposition. Instead, environmental groups should help promote non-governmental voluntary systems, such as ISO 14001, as they also push for stringent governmental regulations.

Trade can be an instrument for ratcheting up the environmental practices of firms in developing countries



In this way, at least, the WTO's pro-trade agenda is not an enemy of the environment. Given that developed countries with stringent environmental standards absorb the bulk of developing country exports, free trade can lead to a ratcheting up of environmental product and process standards in developing countries.

One lesson from this study for environmental NGO's is that international government and non-governmental insti-

The forestry sector and the clothing industry – where NGO's have used market power at home to encourage suppliers in developing countries to adopt progressive policies – are good examples. NGO's can therefore leverage international trade to serve their progressive environmental goals.