Making Ecolabels Work in China

China is faced with many significant environmental problems that are not being adequately addressed by its traditional regulatory approach. The country has been therefore investigating a number of innovative policies and strategies in an attempt to find new solutions to the challenges it faces. One of these approaches is the development of ecolabels; however, the implementation of this idea has hit a number of barriers, which include poor public understanding and false labeling.

To help make ecolabels in China become more effective, a new EEPSEA study surveyed a number of key organizations involved in the development of ecolabels and also assessed public attitudes toward the idea. The study is the work of Haitao Yin and Rui Zhao from the Antai College of Economics and Management at Shanghai Jiao Tong University. It finds that consumers are willing to pay more for products with ecolabels; thus, this strategy should be pursued. It concludes that, in China, using ecolabels could be a useful environmental instrument; however, many hurdles need to be overcome before the full potential of this strategy can be reached. The study therefore suggests establishing policies that would help mainstream ecolabeling in the country.

A summary of EEPSEA Research Report No. 2015-RR5: 'Consumer WTP for Ecolabels in China' by Haitao Yin and Rui Zhao, Shanghai Jiao Tong University. Additional results from the policy paper of this study are also discussed. To send comments or request for additional information, please contact: Haitao Yin, Department of Economics, Antai College of Economics and Management, Shanghai Jiao Tong University, Shanghai, China. Email: haitao.yin@gmail.com

What are ecolabels?

Ecolabels provide information to consumers about various aspects of the environmental performance of products or organizations. They allow people to make informed purchasing decisions that penalize bad environmental behavior and support more sustainable products and production methods. Some ecolabels (Type 1) highlight both the public environmental benefits that purchasing a product can bring (e.g., reduced pollution during its production process) alongside the private benefits that a product can provide to consumers (e.g., through cost savings from reductions in energy use). Other ecolabels (Type 2) only highlight a product's public environmental benefits.

In China, many types of ecolabel have been developed since the idea was officially launched in 1993. Government ecolabel initiatives include the China Environmental Labelling, China Energy Efficiency Label, China Energy Conservation Certification, China Water Conservation Certification, and many others. International and domestic environmental nongovernmental organizations and industrial associations also initiate and promote environmental labeling and certification in China. For instance, ISO 14001 certification, which is promoted by the International Organization for Standardization, is becoming more prevalent across the country.

China's ecolabel challenge

However, China faces a number of challenges relating to the introduction of ecolabels. First, some types of ecolabel are not getting taken up very well. For example, the China Environmental Label has been in place for more than 20 years, yet only 4,220 firms have adopted the label up to now. Second, consumer response to ecolabels has been uneven—for example, reports show that many consumers do not want to pay extra for plastic bags that are certified to be 100% biodegradable.

Fake labeling also seems to be common in China. A recent study of air conditioners found that many units had energy efficiency labels that carried incorrect information. In many cases, these labels overstated their products' environmental credentials and the benefits they would bring to households.

Assessing the potential of ecolabels

In light of these problems, the researchers set out to understand the factors that are impeding the development of ecolabels in China and to work out what should be done to make ecolabeling become a more effective instrument for environmental protection.

This was done by studying the views of three key interested parties as follows: (1) the organizations that are responsible for developing and implementing ecolabels, (2) retail companies, and (3) consumers. The consumer side of the research investigated the factors that affect Chinese consumers' willingness to pay (WTP) for ecolabeled products. To keep the research manageable, the study focused on one specific type of home appliance, i.e., the air conditioner.

The views of key organizations

To get the views of the organizations that are behind China's ecolabels, the researchers ran a focus group discussion (FGD) in Beijing. Participants included officials from the Standardization Administration of the People's Republic China and the China National Institute of Standardization. The former is primarily responsible for developing technical standards and for formulating general policy. The latter plays a more active role in policy implementation and research.

The FGD shed important insights on the legal basis behind China's ecolabels. It is clear that the Energy Saving Law of the People's Republic of China, which was published in 1997 and revised in 2007, provides the legal basis for energy efficiency labeling management. The most relevant articles of this legislation are numbers 18 and 19.

The discussion also highlighted two other key facts. First, that energy efficiency labeling is a mandatory requirement; and second, that self-certification is the basis of energy efficiency labeling. In spite of the widely criticized phenomenon of fake labeling, it was also clear that government agencies have no intention to introduce mandatory third-party certification or governmental certification.

The views of retail companies

To get an understanding of the use of ecolabels from the retail perspective and to assess perceived linkages between ecolabeling and product popularity, the researchers interviewed 13 representatives of retail companies that specialize in marketing air conditioners. These participants were chosen because they frequently talked to customers who are considering buying air conditioners, and also because they had a rich knowledge of the air conditioner retail market.

Based on the interviews, environmental labels (Type 2 ecolabels) are not as popular among retailers as energy efficiency labels (Type 1 ecolabels). In fact, environmental labels are often not displayed on home appliances even when the companies that produce the home appliances have obtained certification.

The interviewees reported that the most important barrier stopping customers from choosing products with a better environmental performance was the higher price that is generally charged for such products. They also reported that an important barrier stopping the use of ecolabels was the fact that consumers were unfamiliar with them. Indeed, they said that the China Energy Efficiency Label was the only label with which consumers demonstrated any level of familiarity.

The salespeople also said that, when consumers were not familiar with ecolabels, the former tended to avoid discussing the issue with the latter. This is because they thought that such discussions might distract potential customers and consequently put them off from making a purchase.

In general, the interviewees thought that it would be desirable to have a unified national standard for ecolabeling. They thought that this would help avoid confusion, promote the recognition of the ecolabel concept, and encourage the acceptance of the idea among consumers.

The views of consumers

The participants of the consumer study were randomly selected at airports and railroad stations. They were presented with one from a selection of "choice sets." These "sets" presented the participants with a choice between two different air-conditioning units. The participants were told that they could also choose not to purchase either machine.

The participants were given information on a variety of attributes for each machine in their choice set. This information included the machines' brands, power capacities, price points, whether it had a silent model, and the types of ecolabels it carried.

The attributes that were included in the choice sets were selected based on field observations of air conditioners sold in supermarkets and on feedback received from air conditioner salespeople.

Some of the participants were also provided with additional environmental information, which highlighted the fact that purchasing energy-saving home appliances would help alleviate serious environmental problems linked to climate change.

Results of the consumer survey

The results of the choice experiment showed that Chinese consumers were willing to pay more for a product that has a label demonstrating both private and public benefits (i.e., an energy efficiency label) or demonstrating only private benefits (i.e., an

Choice Matrix

Attributes	Model X	Model Y
Brand		
Price	 CNY 5,000	 CNY 7,000
Labeled as quiet model	 No	 Yes
Energy label	Issued by Government	Issued by NGO
	High energy efficiency label	Medium energy efficiency label

Table: MWTP for an energy efficiency label, by type of label

MWTP for Energy Efficiency Label	Capacity	Base		Calibrated with Neighbor Choice	
		Scenario 1	Scenario 2	Scenario 1	Scenario 2
GOV Efficiency Level One	1 HP	2,644.98**	4,128.14*	–655.63	1,393.87
	2 HP	173.54	–233.59	1,004.29	739.95
GOV Efficiency Level Two	1 HP	563.91	3,762.71*	–593.55	–832.46
	2 HP	–1,534.98	724.28	–337.35	–400.53
GOV Efficiency Level Three	1 HP	213.87	2,605.44	–1,264.00	–180.80
	2 HP	–183.97	–4,385.14***	–406.31	–4,148.21**
NGO Efficiency Level One	1 HP	2,727.12**	5,187.46**	341.76	14.23
	2 HP	781.15	1,024.36	977.66	–148.62
NGO Efficiency Level Three	1 HP	–708.47	913.61	–3,191.55***	–2,144.38
	2 HP	–2,033.27*	–2,309.79**	308.39	–3,289.08*

Note: * significant at 10%; ** significant at 5%; *** significant at 1%

environmental label that indicates a less environmentally damaging production process).

Indeed, it was found that consumers' willingness to pay for an air conditioner (with a capacity of 1 HP) would increase by CNY 4,152 if it carried a government environmental label. This was in comparison with the price they would be willing to pay for an air conditioner that had no environmental label attached. The fact that consumers were willing to pay more for products with environmental labels was very encouraging, as the environmental label used in the experiment only highlighted public environmental benefits and did not mention any private benefits.

The experiment also found that when more information was provided on the public benefits of using energy saving products, consumers showed a higher willingness to pay for products with energy efficiency labels. This shows that education and communication could be important ways to increase the effectiveness of ecolabels. In addition, the study showed that the coexistence of multiple labels on the same product waters down the effectiveness of all the labels it displays, and that attaching too many labels to a product could lead to confusion.

What should be done next?

In light of their findings from the three main elements of their study, the researchers made the following recommendations:

First, China should make further efforts to popularize the use of energy efficiency and environmental labels, as consumers stated that they are willing to pay more for all types of ecolabels, not just those that convey both private and public benefits.

Second, the government should work with retailing companies to provide advice, information and education so that consumers get more familiar with ecolabels.

Third, the government should be the agency that leads the design and implementation of ecolabels.

Fourth, the government should restrict the number of ecolabels and ensure that multiple labels are not attached to one product at the same time.

Fifth, stakeholders should be patient with the implementation of ecolabels. The effectiveness of ecolabels hinges on whether consumers trust the information that they carry. The issue of fake labeling therefore needs to be resolved. This will require effort from all stakeholders and may take a long time.

The study concludes that the successful implementation of ecolabels in China will require time and further rigorous study. It recommends that future research should further explore people's willingness to pay for ecolabeled products.

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