Role of VA in Japanese policy package

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# Three Pillars of Governmental Mitigation Policy

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(IPCC AR5, Stern Review, Grubb et al 2014)
Carbon Pricing

Non-energy costs

Frontier

Energy costs
Energy Conservation Law

Non-energy costs

Frontier

Energy costs

EC Law

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Tech Development Policy

Non-energy costs

Frontier

Energy costs

Tech Development Policy
Role of VA

◆ VA is not in isolation. VA is part of policy package consisting of energy conservation law, energy taxes, etc.

◆ Energy price and efficiency are high in Japan → VA is a sensible choice to fix remaining market failure while avoiding governmental failure

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VA maximize rational behavior

And helps firms to explore frontier.

Energy costs

Non-energy costs

Frontier
Which pillar?

◆ “VA as implicit carbon pricing” (1\textsuperscript{st} pillar) = carrots for firms & sticks to non-compliance = European VA. Firms “buy” VA.

◆ “VA as maximizing rational behavior (2\textsuperscript{nd} pillar) = NO need for penalty = Japanese VA.

◆ VA also helps firms to explore the frontier of rational actions.

◆ Social responsibility is another motivation in Japan
Effectiveness of VA Plan by Keidanren

- Additionality difficult to analyse due to complex policy package
- High energy efficiency as the policy package
- Strong Institutional framework:
  - Annual PDCA by 3rd party committee, governmental committee.
  - Once the targets are met, they’re revised to do further.
- Much evidence of enhanced actions by firms
VAP by industrial association promoted actions by firms
1. Intra-industry sharing and deployment of best practices
Introducing corporate efforts via email, website, newsletter, etc.

Outline of practices

[For member companies]
- (Japan Chemical Industry Association)
  Deliberation in a special committee followed by communication of results to all member companies, presentation on website, hosting of seminars, provision of information via email, distribution of pamphlets, sharing of information on grants available for energy-saving projects, based on deliberations in a special committee. (Japan Chemical Industry Association)
- (4 Electrical & Electronics Associations)
  Announcement of follow-up results on website and hosting of workshops to report on business activities
- (Japan Foreign Trade Council, Inc.)
  Introduction of practices in organizational newsletter, which has effectively served as media to promote environmental conservation efforts.

[For non-member companies]
- (Japan Chemical Industry Association and others)
  Presentation on website, distribution of pamphlets introducing practices
- (4 Electrical & Electronics Associations)
  Co-hosting of a “energy-saving / power-saving seminar” with the Japan Commerce of Commerce and Industry to introduce advanced energy-saving practices of member companies and introduction of energy-saving practices via website and at exhibitions.

(Expected) effects of practices

- Introducing best practices by industrial organizations, which are most familiar with corporate status, promises to increase acknowledgement of climate change issues as individual corporate challenges and thus encourage engagement in formerly unaddressed practices.

Reference and links

Responses from industrial organizations to questionnaire survey conducted by METI in FY2013
(Source: IEEJ)
2. Efforts towards standardization
Establishing benchmark indices to enable peer comparison of performance among member companies: Japan Department Stores Association

Outline of practices

- The department store industry introduced “benchmark (top-runner) indices” in fiscal 2006 to motivate stores to strive for higher efficiency levels.

- Energy consumption in department stores is varied depending on whether parking space and warehouse operations are housed in the store building, store location (urban/rural, station building/shopping center, etc.), number of customers, array of merchandise, such as for products. Challenges include the different attitudes towards energy-saving efforts observed among stores operating in self-owned buildings and those operating as tenants.

- Provision of information to member stores as while they are still rough guidelines, the indicators enable store operators to learn where their store stands in terms of energy efficiency levels.

(Expected) effects of practices

- Member stores will become able to acknowledge where they stand among other stores in terms of energy efficiency levels through peer comparisons based on store scale.

- The compiled data promise to serve as a useful source of information in gaining understanding of the energy consumption status in each store, designing energy saving plans and other phases of the PDCA cycle and to lead to corporate efforts to promote further energy conservation.

Reference and links

“Global Warming Countermeasures implemented by the department store industry” (document distributed at meeting of Distribution and Service WG, Global Environment Subcommittee, Environment Committee, Industrial Structure Council)

(Source: IEEJ)
6. Other practices
Campaigning to promote efforts: Japan Chain Stores Association, Japan Automobile Manufacturers Association, Inc.

Outline of practices

- In June 2008, the Japan Chain Store Association launched an ongoing “Save the air conditioning” campaign, as cooling, heating and other air conditioning equipment in member stores have room for adjustment and improving settings would effectively reduce energy consumption. In an effort to achieve the target of “an average of 30% of customers declining plastic shopping bags” by all member companies by the end of fiscal 2010, the association also designed and distributed reusable shopping bags to encourage customers to decline plastic shopping bags.

- The Japan Automobile Manufacturers Association, Inc. joins the government and other organizations in encouraging drivers to follow the “10 Tips on Eco-Driving” for the promotion and diffusion of eco-driving. Member companies encourage eco-friendly commuting, promote “no-idling” practices, make “eco-drive” stickers, promote conversion to more eco-friendly means of commuting, and encourage “eco-walk” commuting.

(Expected) effects of practices

- Improve A/C settings in stores through association-led campaigns regarding air conditioning and foster understanding among customers using posters. In the campaign to reduce the use of plastic shopping bags, the ratio of customers declining shopping bags reached 31.01%. Although the target was achieved, the campaign will be continued.

- As the fuel-efficiency of an automobile depends on the driver’s driving practices, eco-driving practices promise higher fuel efficiency and accompanying reductions in CO2 emissions.

10 Tips on Eco-Driving

1. Soft acceleration “e-Start”
Start driving the vehicle by stepping on the accelerator gently (up to 20km/h in first 5 sec). Soft acceleration in daily driving will improve fuel economy by 10%. Starting your engine slowly and gently also leads to safe driving.

2. Keep a safe distance and a constant speed
Try to keep at a constant speed when driving. Short distance between cars may lead to unnecessary acceleration and deceleration, aggravating fuel economy by 2% in the city and by 6% in the suburbs. Keep pace with traffic conditions to minimize speed fluctuation.

3. Release the accelerator quickly when decelerating
When you see a red signal or know that you are stopping, release the accelerator quickly. This will enable fuel economy. Deceleration that is too strong when decelerating or going downhill.

4. Use the A/C properly
The A/C cools and dehumidifies your vehicle. If you need only the heater, switch the A/C off. When you need the A/C, be careful not to overcool the car interior. For example, when the preset temperature is 25℃, the same as the ambient temperature, fuel economy is aggravated by 12%.

5. Stop wasteful idling
Stop the engine when waiting for someone or when loading or unloading. Idling for 10 minutes (with the A/C turned off) consumes 180cc of fuel. Current models generally do not require warm-ups; idle off as soon as the engine is started.

6. Avoid traffic congestion and leave home with time to spare
Check traffic information for traffic jams and control the route to your destination on the map or car navigation tools. Leave home with sufficient time. Check traffic information as you drive to avoid congestion, thus saving fuel and time. For example, getting lost for 10 minutes on a one hour drive will cost you 17% more of fuel.

7. Tire maintenance begins with air pressure checks
Make it a habit to check your tires, which is short of the standard value by 50kpa (0.5kg/cm²), fuel economy decreases by 2% in the city or by 4% in the suburbs. Fuel economy can also be improved by regularly changing engine oil, oil filters, and air cleaner elements.

8. Unload unnecessary items
Unload articles that do not need to be carried. The fuel economy of a vehicle is largely affected by the weight of load. For example, driving with 100kg loaded will aggravate fuel economy by 3%. The fuel economy of a vehicle is also sensitive to air resistance; unmount rooftop ski carriers when not in use.

9. Refrain from obstructive parking
Avoid obstructive parking near intersections and other places blocking traffic cause congestion. Obstructive parking will not only aggravate the fuel economy of other vehicles but will also lead to accidents. Average driving speed is improved on roads free of obstructive parking, thus preventing decreased fuel economy.

10. Know your fuel economy
Check your destination on the map or car navigation tools. Leave home with time to spare. Make it a habit to check your tires, which is short of the standard value by 50kpa (0.5kg/cm²), fuel economy decreases by 2% in the city or by 4% in the suburbs. Fuel economy can also be improved by regularly changing engine oil, oil filters, and air cleaner elements.

(JAMA website, Promotion and diffusion of Eco-drive (energy efficient driving)
http://www.jama.or.jp/eco/earth/earth_04.html


(Source: IEEJ)
The iron and steel industry launched COURSE50 (CO2 Ultimate Reduction in Steelmaking process by innovative technology for Cool Earth 50 in 2008), aiming to reduce CO2 emissions by approximately 30% by controlling CO2 emissions and CO2 capture and storage.

Whereas conventional reduction of iron ore using CO gas generates CO2, hydrogen reduction only generates H2O (water), enabling large reductions of CO2 from being generated.

Development of technologies to capture and store CO2 from blast furnace gas and proactive use of unharnessed heat within the steel plant which had been deemed technologically and economically impossible to use for such processes.

(Expected) effects of practices

Develop next-generation steel-manufacturing technologies that reduce CO2 emissions by approximately 30% by reducing CO2 emission and capturing and storing CO2.

Establish technologies by 2030 for practical use and diffusion by 2050.

The Japan Iron and Steel Federation website http://www.jisf.or.jp/course50/outline/