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Allocation

Options for Mexican ETS

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Outline

1. **Objectives of allocation**
2. **Methods of allocation**
3. **New entrants / closures**
4. **Conclusions**

(1) Objectives of allocation
Overview

The method of allowance allocation helps determine how costs related to the ETS are distributed across society.

When distributing allowances, policy makers will seek to achieve some or all of the following objectives:

1) Managing the transition to an ETS (i.e. *addressing stranded assets, acknowledging early action*)
2) Reducing the risk of carbon leakage or loss of competitiveness (i.e. *historically via the provision of free allowances for at risk sectors*);
3) Raising revenue; and
4) Preserving incentives for cost-effective abatement (i.e. *incentives for reducing emission intensity, promote demand side abatement*).

(2) Methods of allocation
Overview

There are two fundamental approaches to allocation:

1) Auctioning: a government sells allowances in an auction.
2) Free allocation: allowances are given away by a government for free using either a
   a) Grandparenting approach;
   b) Fixed sector benchmarking approach with infrequent updating;
   c) Output based approach with annual updating.

As a number of systems demonstrate, it is possible to use different approaches for different sectors or firms covered by the ETS.

It is common to use a mixture of auctions and free allocation.

(2) Methods of allocation
Auctioning

Auctioning involves the allocation of allowances through a market mechanism, ensuring strong incentives for carbon abatement.

Auctions should be conducted frequently to provide transparency and a steady price signal to participants.

Examples:

- Regional Greenhouse Gas Initiative (RGGI) – 100 % auctioning.
- EU ETS – Use of auctioning has gradually expanded over time (up to half of all allowances in Phase III (2013-2020) may be auctioned).
- Korea ETS – Virtually no allowances are currently auctioned.

(2) Methods of allocation

Advantages / disadvantages

- Revenue: Governments can use income raised in an auction to support several objectives (i.e. other climate policies);
- Less political input: Auctions can be administratively simpler than alternative free allocation approaches;
- Price discovery & market liquidity: Auctions provide a minimum amount of market liquidity & enable price discovery;
- Reduced risk of distortions: In an auction, all entities pay the full cost of allowances, leads to cost-effective abatement;
- Rewarding early action: Early actions and early movers do not face disadvantages and are fully incentivized.
- No direct protection against carbon leakage: This could imply significant financial challenges for sectors exposed to carbon leakage and encourage output (and emissions) to relocate.

(2) Methods of allocation

Free allocation using grandparenting

Key characteristics of allocating allowances for free via grandparenting:

1) Firms receive allowances directly related to their historical emissions (often reduced by some percentage).
2) The amount received remains independent of future output decisions or decisions to reduce carbon intensity.

Need to set a date for the data used for grandparenting for all facilities early (i.e. the base year upon which allocation is determined) to avoid incentives to drive up emissions to increase allocation.

Examples:

- EU ETS – majority of allowances freely allocated in Phase I and II.
- California ETS –free allowances to industrial sectors at CL risk.
- Korea ETS – majority of allowances freely allocated.

(2) Methods of allocation

Advantages / disadvantages

- Attractive method of compensating affected industry: One-off grandparenting could provide transitional support for industries that might otherwise lose significant value from stranded assets;
- Reduces firms' need to trade in the early years: Unless firms are changing rapidly, their free allocation will be close to their level of emissions;
- Windfall profits: incentivizes producers to raise the prices of their products, even though they get allowances for free. Revenues go up, while costs stay the same (i.e. driven by opportunity costs);
- Penalizing early action: Early actions and early movers may face disadvantages if they implemented abatement measures before the period that was selected as the base period for grandparenting.

(2) Methods of allocation

Free allocation with benchmarking

Allocation via benchmarking combines two features.

1) The level of assistance is determined by reference to a product or sector level benchmark emissions intensity.

2) Only infrequent updating of assistance levels in response to changes in firm output.

Free allowances received by installations are calculated by multiplying the installations' historical output level by the benchmark.

Once free allocation is set, future changes in installation output have limited impact on the allowances received by each installation (only if capacity is added or removed).

Example:

- EU ETS: Introduced benchmarking for free allocation in Phase III

(2) Methods of allocation
Advantages / disadvantages

1) Early action rewarded: Firms that reduced their emissions intensity before ETS benefit relative to those with high emissions intensity;
2) Calculation of sector benchmarks: Data-intensive. Complications due to the existence of similar products with different production processes, and through multi-output production processes;
3) Increases high emissions-intensive firms' need to trade from outset: This factor can make the transition into the ETS more difficult.

(2) Methods of allocation

Output based allocation

OBA has two key properties.

1) Allowances are allocated according to a pre-determined emissions intensity;
2) When firms increase or decrease their output, the amount of assistance that they receive correspondingly rises or falls.

Similar to benchmarking approach, however, if there are subsequent changes in firm output, then, with just a small lag, there is an adjustment in the allowances that the firm receives.

Example:

Californian ETS – Applies OBA for free allowances for industry.

(2) Methods of allocation
Advantages / disadvantages

- Maintains incentives to abate emissions intensity: A reduction in emissions intensity reduces emissions liability but has no effect on free allocation;
- Targets leakage risk strongly: An extra unit of output (or production by a new entrant) results in additional allocations, as opposed to grandparenting and benchmarking schemes, where extra output does not usually lead to additional allowances;
- Possible interaction challenges with the overall cap: need to ensure that the number of allowances allocated for free does remain within the cap. This may be more difficult to manage under OBA if overall levels of free allocation are high.

(3) New entrants and closures

Ease of inclusion in different allocation methods

Necessary to consider how allocation method will deal with both new entrants to, and exits from, the market. Ease of implementation varies:

- An auction system accommodates new entrants and exits due to the fact that allowances are readily available for purchase;
- In OBA systems, new entrants are treated in broadly the same way as an existing source that expands production. When a new entrant reports output, it will receive allowances just like existing firms.
- For grandparenting, the approach often involves a new entrants' reserve, which is set aside within the cap to provide free allocation to eligible new entrants. Closures are normally associated with the loss of rights to free allowances (more complex to implement).

(4) Conclusions
Future considerations

Based upon the experiences of the different allocation methods applied in ETSs around the world, key take-away messages include:

1) The majority of ETSs apply a mix of allocation methods, initially starting with higher levels of free allocation and then increasing share of auctioning over time;

2) However, a minimum share of auctioning in the allocation method is always a good way to ensure there is an ETS price, which is a key indicator for subsequent ETS evaluation;

3) Auctioning also allows for the implementation of more short term safeguards, especially for setting a price cap and price floor;

4) Simplier system for allocation is easier to implement with less likelihood of unintended consequences (i.e. perverse incentives) of applying more complex allocation rules.