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Options and Feasibility of a European Refund System for Metal Beverage Cans

Final Report

Appendix 4: Options Development

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1.0 Development of Interoperability Options

1.1 Introduction

The Project Specification states the following as a key task:

'The contractor shall identify elements for possible solutions to address the potential problems arising from the lack of compatibility of national schemes for collection and recycling of metal beverage cans. In doing so, the contractor shall indicate what are in his view the appropriate levels of governance where such solutions should be adopted in line with the principles of subsidiarity and proportionality'.

It is clear that proposed solutions should relate to the problems they seek to address.

The key problems identified relate to:

- 1) Privately imported beverages in metal cans are not recycled to as high an extent, or as high a quality, as national cans when reach the end of their use;
- 2) Privately imported beverages in metal cans are more commonly littered in the environment when they reach the end of their use as compared to deposit cans;
- 3) Consumers who have paid deposits on beverage cans in one Member State cannot claim them back in another;
- 4) The management of waste packaging from privately imported cans is not funded by the producers who placed the packaging on the market (in the country of purchase).

The identification of possible solution was also to be guided by elements of the key objectives of the study. There was a need to identify:

'Interoperability options to link the different (groups of) systems, in order to remove cross-border barriers and allow for cross-border refunds'.

This objective links most closely to problem 3) identified above, however, the consequence of allowing cross-border refunds is likely to increase recycling and reduce littering - i.e. 1) and 2) above. In addition it was also noted that:

'Interoperability options can respect the different nature of the systems by acting as an interface, or can imply the full or partial harmonisation of (groups of) systems'.

Thus recognising proportionality in developing solutions to the identified problems. The objective was also to seek to identify options which link all or only some of the systems. By systems this statement refers to national collection systems for metal beverage cans:

Interoperability options shall be identified that can link all of the systems, or some of the systems.

Finally:

The advantages and disadvantages of each interoperability option shall be described'.

We also note that the Project Specifications set out a number of possible solutions which the contractor was required to consider, namely:

- The introduction of one European refund system for metal beverage cans;
- The harmonisation of all the existing refund systems for metal beverage cans;
- The introduction of a number of harmonised cross-border refund schemes for metal beverage cans.

The following list indicates the process that was taken to arrive at the final set of interoperability options which were to be further evaluated:

- 1) Considering the objectives and requirements of the study set out above, a full list of potential interoperability options, which could address the key problems identified, was developed;
- 2) Each interoperability option was briefly described, and the advantages and disadvantages from an environmental, economic, social and administrative burden point of view, were considered;
- 3) Each interoperability option was assessed in terms of proportionality, subsidiarity and feasibility; and
- 4) Finally, the selection of options and approach to evaluation was then considered.

1.2 Full List of Interoperability Options

Considering the full range of interoperability options which could address the problems identified the following list of options was developed:

1. National requirement to increase recycling and reduce littering of privately imported cans in Denmark;
2. National requirement for the German deposit to be applied to all metal cans sold in Germany;
3. Bi-lateral agreement between Germany and Denmark to compensate for cost of managing cross-border cans;
4. Bi-lateral agreement between Germany and Denmark to ensure the national systems are interoperable;
5. Bi-lateral Agreement between Germany and Denmark to converge to a single, harmonised Deposit Refund Systems (DRS) design for metal cans;
6. Requirement for all existing and future Deposit Refund Systems (DRSs) for metal cans to be interoperable;
7. Requirement for all existing and future Deposit Refund Systems (DRSs) for metal cans to form a single system;

8. Requirement for all Member States to Implement National Deposit Refund Systems (DRSs);
9. A single European Union Deposit Refund System (DRS) for metal cans to cover all member states;
10. Requirement for all Member States to be able to refund deposits already paid to any Deposit Refund System (DRS) in the EU.

1.3 Description of Options and Advantages / Disadvantages

The following section provides a description of each interoperability option, along with a summary of the advantages or disadvantages for each.

1.3.1 National Requirement to Increase Recycling and Reduce Littering of Privately Imported Cans in Denmark

The Danish Government could take national measures to improve the efficiency of the collection systems for metal beverage cans and implement public communication campaigns to reduce littering in problem areas.

Advantages

The national measures would not require any co-operation from any other Member State or Institution;

Disadvantages

The responsibility of payment for the privately imported cans is still not fully addressed as they are placed on the market in Germany, and this would require some degree of German co-operation;

The cans will still not be recovered to as high an extent as the domestic market;

The stated intent for deposits to be paid in the border shops and redeemed to consumers in Denmark would not be achieved.

1.3.2 National Requirement for the German Deposit to be Applied to all Metal Cans Sold in Germany

The German deposit could be applied to all cans sold in Germany, including border-cans. The deposit would be redeemable only in Germany. This would require addressing the court decision in Schleswig-Holstein that is currently in place which allows border shoppers to avoid paying the German deposit.

The pros and cons of this system clearly depend upon one's view as to how strongly this would affect the cross-border trade. Two extreme perspectives would be:

- There is no impact, with consumers prepared to return cans to Germany each time they visit the border shops;
- There is a significant impact on cross-border trade with consumers unwilling to pay the additional 'first up' cost of the deposit.

The impact therefore depends upon how close to one of these extremes the actual situation would be. Over and above this, however, the following might be said:

Advantages

The incentive for consumers to return cans remains (albeit the system is not so convenient);

The need for exemptions from deposits is removed.

Disadvantages

Requires border shoppers to transport empty containers back to Germany to redeem deposits (though this could be associated with repeat trips);

Does not resolve other (albeit less significant) border trade problems (e.g. with Sweden and Finland/Estonia), or issues which may arise in any future implementation of DRSs.

1.3.3 Bi-lateral agreement between Germany and Denmark to Compensate for Cost of Managing Cross-border Metal Cans

This option assumes no specific adaptation of the respective DRSs. It acknowledges, however, that if cans that bear no deposit are to be managed better in Denmark, there are likely to be additional costs incurred by the Danish DRS and the wider system of packaging recycling in Denmark. This option could be achieved in various ways, and could be based around varying levels of action taken on the part of the Danish packaging recycling system. For example, the funds might support an increased density of cans banks, or a more dense system of 'on-the-go' recycling banks (intended to reduce littering). One way of achieving this would be a straightforward agreement between the two countries for a formula-based re-imbursment in the form of a lump sum. Another mechanism for re-imbursment could be via a small 'border shop levy', used to generate funds to support the management of cans in Denmark.

The basis for support could relate to one or more of (for example):

1. the costs which are avoided by the German DRS not having to deal with cans sold in Germany;
2. the costs of managing German cans in Denmark (including elements of litter clean-up).

Advantages

Denmark compensated for additional costs of managing the non-deposit cans;

May provide a model for other bilateral agreements (and, arguably, not just where DRSs are in place).

Disadvantages

May not directly change consumers' behaviour;

Does not directly address the underlying interoperability issue;

Issues of transparency in the mechanism may arise;

Does not resolve other (albeit less significant) border trade problems (e.g. with Sweden and Finland/Estonia), or issues which may arise in any future implementation of DRSSs.

1.3.4 Bi-lateral Agreement between Germany and Denmark to Ensure the National Systems are Interoperable

Under this option, an agreement between Germany and Denmark would enable the take-back of cans purchased in Germany via the Danish DRS (i.e. by Dansk Retursystem) and a deposit would be redeemable in one of following ways:

- a. The German deposit is applied to border-cans sold in Germany and arrangements are made to pay the German deposit back to Danish consumers in Denmark; or
- b. The Danish deposit is applied specifically to border-cans in north German border-shops. The Danish consumers would claim the deposit when taken back to Dansk Retursystem.

In both cases, it would be expected that where necessary, some form of fee would be paid by the German system to the Danish system to compensate for additional costs.

As with the previous option, the pros and cons of this system clearly depend upon one's view as to how strongly this would affect the cross-border trade. However, it might be expected that, other things being equal, any effect would be less than in the previous example as a result of the greater convenience of the take-back system.

Advantages

The incentive for consumers to return cans remains;

Exemptions from deposits are no longer required for border shopping areas;

The system for returns is convenient;

Levels of littering of cans currently purchased without deposits from border shops may be expected to fall (as cans are accepted into the Danish system);

Recycling of cans currently purchased without deposits from border shops may be expected to increase (as cans are accepted into the Danish system);

May provide the basis for a model for other bilateral agreements as necessary.

Disadvantages

Arrangement required to handle the different VAT levied in Germany and Denmark (on the value of the deposit).

The two countries do not use the same currency so that if the German deposit was used, redemption rates in Denmark would need to be periodically revised in line with exchange rate movements;

Does not resolve other (albeit less significant) border trade problems (e.g. with Sweden and Finland/Estonia), or issues which may arise in any future implementation of DRSSs.

1.3.5 Bi-lateral Agreement between Germany and Denmark to Converge to a Single, Harmonised DRS Design for Cans

Under this option, an agreement would be developed such that the Danish and German deposit systems would converge to a single, uniform design for cans over an agreed period of time. The border shopping areas would charge deposits on their sales. The common elements of the design might be expected to include:

- The scope of the system (which containers are included / excluded from the DRS);
- The level of the deposit paid / to be redeemed;
- The means of labelling of beverage containers; and
- The ability to accept the same range of containers and refund.

Advantages

The incentive for consumers to return cans remains;

The system for returns is convenient;

Exemptions from deposits are no longer required for border shopping areas;

Levels of littering of cans currently purchased without deposits from border shops may be expected to fall (as cans are accepted into the Danish system);

Recycling of cans currently purchased without deposits from border shops may be expected to increase (as cans are accepted into the Danish system);

Labelling, as far as deposits are concerned, would be uniform across the two countries;

A single system should be easy to understand for border shoppers;

Disadvantages

One, or other, or (perhaps more fairly) both countries may have to alter their systems;

The level of deposits in place may have been chosen with specific objectives in mind. These objectives may be compromised by use of a uniform deposit rate;

Germany and Denmark use the different currencies so that deposit / redemption rates would need to be periodically revised in line with exchange rate movements;

Does not resolve other (albeit less significant) border trade problems (e.g. with Sweden and Finland/Estonia), or issues which may arise in any future implementation of DRSs.

1.3.6 Requirement for all Existing and Future Deposit Refund Systems (DRSs) for Metal Cans to be Interoperable

In this option, current systems would be amended so that they accept beverage cans from any other DRS, and pay back deposits to consumers. DRS operators would be required to make arrangements for the purpose of transferring deposits between

systems and Member States, and arranging an appropriate administration fee. The essential element is that there is some basis for redeeming deposits from other DRSs through all existing systems at an agreed level.

There are a number of possible variants of this option, including:

- a. A central organisation / clearing house is set up to co-ordinate cross-border deposit payments and administration of national deposits.
- b. A single value 'border' or 'common' deposit value is redeemed for any non-national containers.
- c. The arrangement is made applicable only for 'neighbouring' countries' DRSs.
- d. Containers sold in tax free areas in the Baltic Sea area (such as ferries) are included in the DRS.

Advantages

The solution is targeted at the problems related to border trade;

Any consumers who have purchased deposit-bearing cans in one country with a DRS and consumed them in another country with a DRS would be able to have their deposit redeemed (most likely raising return rates in those areas where cross-border trade is significant);

There would be a marginal improvement in the EU recycling rate for cans (associated with cross-border shopping).

Disadvantages

All DRSs need to be changed (to varying degrees) to resolve problems which mainly arise at the border between Germany and Denmark;

Not all DRS countries use the same currency so that redemption rates would need to be periodically adjusted in line with exchange rate movements.

1.3.7 Requirement for all Existing and Future Deposit Refund Systems (DRSs) for Metal Cans to Form a Single System

In this option, existing DRSs would be reconfigured so that they follow a common design and are centrally operated. The system would be centrally organised and operated, with representatives from all DRSs included in its management. Any future DRSs would also be required to conform to this design specification. Common features of the design could include some or all of the following:

- Level of deposit;
- Retailers' handling fee;
- Producer levy; and
- Beverage container marking.

Advantages

Any consumers who have purchased deposit-bearing cans in one country with a DRS and consumed them in another country with a DRS would be able to

have their deposit redeemed (most likely raising return rates in those areas where cross-border trade is significant);

One organisation will cover all countries;

There would be a marginal improvement in the EU recycling rate for cans (associated with cross-border shopping);

The need for exemptions from deposits (for example, in the border shopping area of Germany) is essentially removed.

Disadvantages

All DRSs would need to be revised so as to resolve problems which arise, primarily, at the border between Germany and Denmark;

The level of deposits in countries with DRSs in place may have been chosen with specific objectives in mind. These objectives may be compromised by use of a uniform deposit rate;

Not all DRS countries use the same currency so that redemption rates would need to be periodically revised in line with exchange rate movements;

Where deposit-bearing cans are purchased in one Member State, the consumer still foregoes the deposit if the can is consumed in another Member State with no DRS.

1.3.8 Requirement for all Member States to Implement National Deposit Refund Systems (DRSs)

A further possibility would be to require all Member States to operate a DRS for beverage cans, but with each given the freedom to choose how to develop its particular scheme. In each case, however, there would be a requirement to ensure inter-operability, typically through redeeming deposits paid in other countries. There would be a need for those Member States where deposits were paid to reimburse those who redeemed deposits paid in that country (a form of clearing mechanism).

Advantages

Any consumers who have purchased deposit-bearing cans in one country and consumed them in another would be able to have their deposit easily redeemed (most likely raising return rates in those areas where cross-border trade is significant);

The overall EU recycling rate for cans might increase (though this would depend on the level of the deposits chosen in the different countries).

Disadvantages

Many countries have previously chosen not to use DRS, and would be reluctant to do so. Politically, the solution would be difficult to implement;

Countries without DRSs in place would have to change their systems of packaging recovery;

A DRS for cans only would potentially distort trade in respect of the different beverage packaging materials;

Not all countries use the same currency so that redemption rates would need to be periodically revised in line with exchange rate movements;

Borders with countries outside the EU would still be potentially affected by the cross-border problem unless specific measures were developed.

1.3.9 Single EU Deposit Refund System (DRS) for Metal Cans to cover all Member States

This option would require that any beverage can sold within the EU would have a deposit, and that the deposit would be redeemable in any other EU country. The system would be centrally organised and operated, with representatives from all Member States included in its management. New infrastructure in addition to, or replacing, existing collection systems for metal cans would be required, although national conditions would dictate the type and amount introduced. The common elements of the design across Member States might be expected to include:

- The scope of the system (which containers are included / excluded from the DRS);
- The level of the deposit paid / to be redeemed;
- The means of labelling of beverage containers; and
- The ability to accept the same range of containers in different countries and refund deposits to consumers.

The role of the central organisation could be one of the following:

- a. Control over all elements of the DRS design and operation in all Member States; or
- b. Central EU co-ordination for producer's fees, deposit transfer and material management, and the setting of best practice guidelines for collection, but with Member States developing national infrastructure.

Advantages

Labelling, as far as deposits are concerned, would be uniform across the EU;

A single system should be easy to understand;

Any consumer who has purchased deposit-bearing cans in one country and consumed them in another would be able to have their deposit easily redeemed (most likely raising return rates in those areas where cross-border trade is significant);

The overall EU recycling rate for cans might increase (although this would depend on the level of the deposit; part of the rationale would probably be to achieve this).

Disadvantages

Many countries have previously chosen not to use DRS, and would be reluctant to do so. Politically, the solution would be difficult to implement;

Both countries with and without DRSs in place would have to alter their systems which will entail additional costs;

The level of deposits in countries with DRSs in place may have been chosen with specific objectives in mind. These objectives may be compromised by use of a uniform deposit rate;

A DRS for cans only would potentially distort trade in respect of other beverage packaging materials;

Not all countries use the same currency so that deposit / redemption rates would need to be periodically revised in line with exchange rate movements;

Borders with countries outside the EU would still be potentially affected by the cross-border problem unless specific measures were developed.

1.3.10 Requirement for All Member States to be able to Refund Deposits already paid to any Deposit Refund System (DRS) in the EU

The original Specification spoke of an EU-wide refund system. One can conceive of a uniform refund system, even where there is no uniform system for paying deposits in place. The principle aim here would be to enable consumers to recoup the deposit paid in another country. Evidently, such a system would need a system whereby those Member States in which deposits were paid reimbursed those Member States who redeemed the same deposits.

Advantages

Any consumers who have purchased deposit-bearing cans in one country and consumed them in another would be able to have their deposit easily redeemed (most likely raising return rates in those areas where cross-border trade is significant);

There would be a marginal improvement in the EU recycling rate for cans (associated with cross-border shopping).

Disadvantages

Many countries have previously chosen not to use DRS, and would be reluctant to implement an infrastructure designed to cater for those with DRSs in place;

All countries without DRSs in place would have to duplicate their packaging recovery systems for beverage cans. For many countries, the required infrastructure could be significant, but that infrastructure might have limited use;

Implementing the system for cans only would potentially distort trade in respect of the different beverage packaging materials;

Not all countries use the same currency so that redemption rates would need to be periodically revised in line with exchange rate movements;

Borders with countries outside the EU would still be potentially affected by the cross-border problem unless specific measures were developed.

1.4 Assessment of Proportionality, Subsidiarity and Feasibility

Table 1-1 shows all of the options discussed above, and assessments against each of the following three criteria:

Proportionality

The principle of proportionality seeks to set actions taken by the institutions of the Union within specified bounds. Under this rule, the involvement of the institutions must be limited to what is necessary to achieve the objectives of the Treaties. In other words, the content and form of the action must be in keeping with the aim pursued.

Subsidiarity

The principle of subsidiarity ensures that decisions are taken as closely as possible to the citizen and that constant checks are made to verify that action at Union level is justified in light of the possibilities available at national, regional or local level. Specifically, it is the principle whereby the Union does not take action (except in the areas that fall within its exclusive competence), unless it is more effective than action taken at national, regional or local level. It is closely bound up with the principle of proportionality, which requires that any action by the Union should not go beyond what is necessary to achieve the objectives of the Treaties.

Feasibility

The option can happen and has a reasonable expectation of being implemented.

Each option is judged to have passed or failed in regard to each assessment criteria, with some accorded the status of 'potential pass' or 'potential fail'. The consideration was that any of the options for which there is one or more outright 'FAIL' should not be subject to detailed evaluation.

Table 1-1: Summary of Options Against Criteria

No.	Option	Proportionality Test	Subsidiarity Test	Feasibility Test
1	National requirement to increase recycling and reduce littering of privately imported cans in Denmark;	Agreement would be limited to the country which has reported issues relating to littering and recycling. PASS	Solution to be obtained at national level. PASS	Uni-lateral agreement is not the preferred option as interoperability is not addressed, and the payment of producer fees to support the system would require the co-operation of Germany regardless. POTENTIAL FAIL
2	National requirement for the German deposit to be applied to all metal cans sold in Germany;	Agreement would be limited to the parties that are currently experiencing the problem. PASS	Agreement to be designed and agreed by the two parties involved. PASS	Member State intent is to have deposit paid back to border-shoppers near to where they reside. POTENTIAL FAIL
3	Bi-lateral agreement between Germany and Denmark to compensate for cost of managing cross-border cans;	Agreement would be limited to the parties that are currently experiencing the problem. However, the approach may not solve the problem. POTENTIAL PASS	Agreement to be designed and agreed by the two parties involved. PASS	Feasible. PASS
4	Bi-lateral agreement between Germany and Denmark to ensure the national systems are interoperable;	Agreement would be limited to the parties that are currently experiencing the problem. PASS	Agreement to be designed and agreed by the two parties involved. PASS	Potentially feasible. POTENTIAL PASS
5	Bi-lateral Agreement between Germany and Denmark to converge to a single, harmonised Deposit Refund Systems (DRS) design for metal cans;	Agreement would be limited to the parties that are currently experiencing the problem. PASS	Agreement to be designed and agreed by the two parties involved. PASS	Feasible. PASS
6	Requirement for all existing and future Deposit Refund Systems (DRSs) for metal cans to be interoperable;	Major problems are currently limited to border trade between Denmark/Germany (with some border	EU action limited to setting some parameters for DRS. Does not force complete new systems. POTENTIAL PASS	May be politically difficult to generate agreement across all systems. POTENTIAL PASS

No.	Option	Proportionality Test	Subsidiarity Test	Feasibility Test
		trade impact with Sweden, Estonia and Finland). Protects against future problems should price differentials develop. POTENTIAL PASS		
7	Requirement for all existing and future Deposit Refund Systems (DRSs) for metal cans to form a single system;	Major problems are currently limited to border trade between Denmark/Germany. However, some border trade impacts are seen with Sweden, Estonia and Finland. The approach would protect against future problems should new price differentials (associated with changes in excise duty) develop. This option would need closer examination to understand whether the response was a proportional one. POTENTIAL PASS	Countries with DRSs in place have different designs and, notably, deposit levels (partly reflecting issues such as the purchasing power in the countries concerned). The suggestion is that MSs would be reluctant to reduce control over key design variables. POTENTIAL FAIL	Difficult to persuade all stakeholders for each system to adopt changes. Also, the relevant MSs do not share the same currency so that exchange rate movements would need to be accounted for. POTENTIAL FAIL
8	Requirement for all Member States to Implement National Deposit Refund Systems (DRSs);	Not considered a proportional response to specific problems – problems encountered by a small number of member states would cause a major change to all. FAIL	The approach would imply EU action to resolve specific member state issues: requiring all MSs to implement DRSs so as to resolve a problem in specific regions fails this test. FAIL	Although some Member States are actively considering DRSs, many are not, and have little inclination to do so. The approach seems unlikely to be supported politically. It is also questionable whether it would make sense for such a scheme to be restricted only to beverage cans. FAIL
9	A single European Union Deposit Refund System (DRS) for metal cans	Not considered a proportional response to specific problems – problems	The approach would imply EU action to resolve specific member state issues:	Although some Member States are actively considering DRSs, many are not,

No.	Option	Proportionality Test	Subsidiarity Test	Feasibility Test
	to cover all member states;	encountered by a small number of member states would cause a major change to all. FAIL	imposing a DRS on all member states to resolve a problem in specific regions fails this test. FAIL	and have little inclination to do so. Even if they did, they would seek to design 'own systems'. The approach seems unlikely to be supported politically. It is also questionable whether it would make sense for such a scheme to be restricted only to beverage cans. FAIL
10	Requirement for all Member States to be able to refund deposits already paid to any Deposit Refund System (DRS) in the EU.	Not considered a proportional response to specific problems – in many countries, there are few (if any) imports of cans bearing a deposit in many EU Member States. FAIL	The approach would imply EU action to resolve specific member state issues: forcing a redemption scheme on all member states to resolve a problem in quite specific regions fails this test. FAIL	The approach seems highly unlikely to be supported politically. It would require countries to establish infrastructure for the (limited) eventuality of return of deposit-bearing cans from other countries. To be 'proportionate', such a system would most probably be very inconvenient, and hence, of limited effect. Those without DRSs might reasonably request full compensation from DRS countries for implementing such a system. FAIL

1.5 Interoperability Options to be Assessed and Approach to Evaluation

The following list shows the interoperability options that were chosen to be evaluated in the latter stages of the study:

- National requirement for the German deposit to be applied to all metal cans sold in Germany;
- Bi-lateral agreement between Germany and Denmark to compensate for cost of managing cross-border cans;
- Bi-lateral agreement between Germany and Denmark to ensure the national systems are interoperable;

- Requirement for all existing and future Deposit Refund Systems (DRSs) for metal cans to be interoperable;
- Requirement for all existing and future Deposit Refund Systems (DRSs) for metal cans to form a single system;
- A single European Union Deposit Refund System (DRS) for metal cans to cover all member states.

The aim of including a number of options, which may be deemed unfeasible by some stakeholders, was to ensure additional evidence on the feasibility of the options was gathered through the stakeholder consultation. Moreover, some options deemed unfeasible due to political reasons and the like, may well be those which deliver the greatest benefits to society when evaluated in a more objective manner. Feasibility assessments are included in the detailed evaluation stage also.

In addition, we note the following points in relation to the development of interoperability options:

- 1) There were a range of conflicting stakeholder views regarding the nature, scale and responsibility for any problems relating to the cross-border movement of metal beverage cans. Thus we note that the options chosen for consideration are likely to be contested.
- 2) One of the key barriers / concerns regarding the interoperability of national deposit refund systems is the assumed cost and who will pay for this cost. Thus any analysis which includes the cost of interoperability may mitigate the concern if the problem revolves around the uncertainty of this cost.
- 3) There is a focus on regional issues, but the intention was to use any regional issues as 'case studies', to provide advice and guidance to any Member State with an existing DRS, or any wishing to implement a DRS, and seeking to avoid any issues relating to cross-border movements of beverage containers.