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A national mandatory deposit law has been proposed as part of a potential solution to solid waste disposal and materials recycling problems of the Nation. Solid waste generation has doubled since 1950, collection and disposal costs have risen rapidly, and it is becoming increasingly difficult to find acceptable means and locations for disposal of solid waste. Analysis indicates that with mandatory deposits there would be approximately an 80% reduction in beverage container litter. The number of empty containers returned to retail stores, wholesalers, breweries, and bottlers would increase roughly fourfold. If the industry does not shift to greater use of refillable bottles, industry costs would rise because containers designed for one use would have to be handled, transported, and made available for recycling or disposal. However, net costs to industry would probably go down with mandatory deposits. In addition, a mandatory deposit system would probably reduce energy and raw material use in the industry. (RRS)

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of the
Senate Committee on Commerce, Science, and Transportation

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Mr. Chairman and Members of the Committee. Thank you for the opportunity to discuss with you the results of our recent study on the "Potential Effects of a National Mandatory Deposit on Beverage Containers." We undertook this study in order to provide the Congress with pertinent information and analysis on this controversial issue.

A national mandatory deposit law has been proposed as one part of a potential solution to solid waste disposal and materials recycling problems of the Nation. The dimensions of the solid waste problem have been noted by the Environmental Protection Agency in its fourth report to Congress:

-- Solid waste generation has doubled since 1950.

-- Collection and disposal costs have risen rapidly.

-- It is becoming increasingly difficult to find acceptable means and locations for disposal of solid waste.

Suggestions for alleviating solid waste problems have included both measures to reduce the amount of post-consumer waste and efforts to increase recycling and to recover valuable materials from discarded solid waste. Mandatory deposits on beverage containers have been proposed as one way to reduce the amount of solid waste.

RESULTS OF THE STUDY

Any study of this type must be based in part on assumptions about the future. Some of the results of a study are often very sensitive to these assumptions. Recognizing this, we have tried to distinguish those results of our study which are sensitive to the assumptions from those which are not. Our analysis leads us to the conclusion that the following results of a mandatory deposit system are not sensitive to the assumptions:

-- There would be substantially less beverage container litter and somewhat less total litter and total solid waste.

-- More containers would be returned and the costs of handling these containers would increase

-- The amount of money paid for deposits but not claimed would rise and this would increase industry income.

These would be fairly certain results of increasing the coverage of deposits from its present level (about one-quarter) to 100 percent. Our analysis indicates that there would be approximately an 80 percent reduction in beverage container litter. The reduction in total litter could range from 10 to 40 percent depending on local conditions.

The number of empty containers returned to retail stores, wholesalers, breweries and bottlers would increase roughly fourfold. If the industry does not shift to greater use of refillable bottles, industry costs would rise because containers designed for one use would be returned and would have to be handled, transported, and made available for recycling or disposal. Not every deposit container would be returned for deposit refund, so unrefunded deposits would accumulate. These monies, which are costs to the consumer who doesn't return the deposit container, are revenue to the firm which first put the deposit on the container. These deposits-not-claimed would increase roughly in proportion to the increase in deposit coverage.

Other results of our analysis depend on the number of new containers manufactured. There is more uncertainty attached to these results because they depend on the industry response to a mandatory deposit system. If the beverage firms decided to switch from containers designed for one use to refillable containers, there would be fewer new containers made in any given year compared with production of new containers under current circumstances. Our analysis used a range of industry responses to estimate the results of changing the number of containers made. The results of our analyses of a three-year transition period from the current system to a mandatory deposit system are:

-- New plant and equipment costing $.8 to $2.4 billion would be required to convert the current beverage system to a mandatory deposit system.

-- Container costs under a mandatory deposit system would decline by $1.1 billion to $3.7 billion.

-- Net cost (including labor, plant and equipment, containers, and transportation) would decline by $1.0 to $1.3 billion.

After the industry has adjusted to the new system, the following effects were estimated:

-- net annual decrease in industry costs--both capital and production--after adjustment of the beverage system to a mandatory deposit. These cost reductions are estimated to be in the range of $1.3 to $1.9 billion.

-- decreases in container production.

-- annual reductions of 2 to 3 percent in iron ore and bauxite requirements by the container industry by 1985.

-- energy reductions of approximately 155 trillion BTUs (2/10 of 1 percent of total energy demand in 1985).

These estimates result from assumptions about individual consumer's as well as business firms' reactions to a national mandatory deposit on all beverage containers.

The main assumptions were:

-- 90 percent of the glass (refillable) bottles and 80 percent of the cans would be returned.

-- The container mix, or market share, after adjustment to a mandatory deposit system would be in the range of 48 and 80 percent for refillable bottles and 52 to 20 percent for cans.

-- Beverage sales would not be adversely affected once the mandatory deposit system was fully in place.

Because of the importance of these assumptions, we have stated them explicitly and reviewed them carefully. In addition to our own review, the report was reviewed by four Federal agencies, as well as eight non-Federal groups of individuals including industry groups.

The assumption of the return rates for containers is one of the most debated technical points of the mandatory deposit issue. Our assumption rests on actual experiences in Oregon and Vermont, the two states have recent experiences with mandatory deposits. Our assumption also takes into account the national experience with refillable bottles since 1947, and to a lesser extent, on the Department of Defense experiment with mandatory deposits at selected military bases. However, different return rates do not substantially change the main results of the analysis for litter and solid waste, containers returned, or unclaimed deposits. A brief example using containers returned will demonstrate this:

For first year after adjustment to a mandatory deposit system, we estimate that there would be about 122 billion beer and soft drink containers sold with a deposit, and 103 to 107 billion would be returned which is almost exactly four times greater than the 26 million containers which would be refunded that year under the baseline estimate. If the return rate turned out to be only 75 percent, 92 billion containers would be returned which is 3.5 times greater than the baseline.

THE INDUSTRY RESPONSE

Our analysis indicates that certain industry costs would be sensitive to return rates under a mandatory deposit system. If the actual return rate under a mandatory system was approximately 75 percent instead of 90 percent for bottles and 80 percent for cans, then each category of industry costs would be different. Capital costs would be somewhat less and storage and handling costs of empty containers would be less. Container costs would be markedly higher if refillable bottles continued in use. These cost differences would be offset to a great extent, however, by an increase in retained deposits, and the net cost difference is not likely to be large.

Our alternative assumptions concerning industry response to a mandatory system--which we lable Mix I or Mix II in the report--reflects our uncertainty about this matter. The cheaper refillable container would seem to be the logical result of a mandatory deposit. Industry might, however, decide to continue to use its currently available filling equipment and make adjustments very slowly to containers designed for refilling. We selected a range of industry responses, and our cost analyses did not reveal large differences in outcomes.

In summary, Mr. Chairman, our analyses indicates that a deposit on each beverage container to be sold nationally would reduce litter and solid waste and increase the number of containers returned. This would imply more handling by the industry, but we estimated that net costs to industry would probably go down. In addition to these primary concerns, a mandatory deposit system would most likely reduce energy and raw material use in the beverage industry.

If the Congress should decide to enact legislation requiring deposits on beverage containers, there are a number of features which we think would be helpful.

-- A deposit should be required on <u>all</u> beer and soft drink containers, since benefits result when as many containers as possible are returned for reuse.

-- There should be efforts to inform the public about the need to return containers.

-- Consideration should be given to enhanced access to retraining programs and unemployment compensation for areas with employment problems resulting from the legislation.

-- Some unredeemed deposits should be placed in a fund for municipalities to clean up litter and solid waste.

-- Provision should be made to measure and analyze the effects.

-- Measures should be taken to assure that any cans which continue to be used are treated the same as refillable bottles, and are recycled after being returned.

That concludes my prepared statement, Mr. Chairman. We will be happy to try to answer any questions you may have.