

Enviro-Economic Policy Instruments and Waste Management: The Prospects of Applying the
Indifferent Consumers-Pay Principle in Malaysia

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Abstract

The constant struggle by the local authorities in addressing the waste problem would call for a thorough examination of the economics of waste management, as well as the need to search for the most appropriate enviro-economic policy instrument that can be employed in the context of a fast-paced developing economy such as Malaysia. A number of instruments have been put into practice by various authorities in Malaysia in particular, and in other countries in general, but the effectiveness of each is being questioned. It is hereby proposed that a new instrument be introduced in Malaysia, which is a variation of the “Polluters-Pay” Principle, as outlined in the 9th Malaysia Plan (2006-2010). The primary target ought to be the consumers, and not necessarily the producers: those who participate in a recycling scheme are not required to pay a certain levy when purchasing new goods. In return, when they deposit the unwanted items into recycling bins designated for different types of materials, they will be rewarded with equivalent credit points that can be redeemed at points of sale. It is anticipated in at least 7 aspects if a positive impact of the application of the proposed instrument would be realized. Thus, the waste recycling industry, as envisaged since the 8th Malaysia Plan (2001-2005), would become a reality.

Keywords: Malaysia, economics instrument, Indifferent Consumers-Pay Principle, recyclables, non-private Organization (NP2O)

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Introduction

The national perspective on solid “waste collection and disposal” has changed since the 1972 Statement of Malaysia at the UN Conference on Human Environment in Stockholm, from a simplified version, to an increasingly challenging one. In urban areas “solid waste collection was satisfactory, but the disposal system was largely controlled by tipping and burning. The disposal of waste was like that in many countries, and an organized programme in this direction was needed. The local authorities in many cases were hampered by the lack of trained and experienced personnel, financial resources and knowledge of the effects of health.” In rural areas, “solid waste was buried or burnt, but there was room for considerable improvement in this area (Malaysia, 1971:10, 12). The present challenge, as posed in the Outline Perspective Plan (2001-2010) (OPP3), is the need for the Government of Malaysia to adopt “a comprehensive waste management policy, and also to formulate strategies for waste reduction, reuse, and recycling” (Malaysia, 2001:187). In other words, the 3R strategy must be in line with the remaining equally critical 2Rs: Recovery for Energy, and Repository of “non-marketable” materials for future use, and not dumped and buried forever in landfills.

During the Eighth Malaysia Plan (8MP) Period (2001-2005), the local authorities had to handle an estimated 16.2 million tonnes of waste throughout the country. A nationwide recycling campaign was launched in December, 2000 “to promote greater awareness among the public on the need to recycle and reuse waste so as to reduce the amount of waste generated” (Malaysia, 2001:506). However, it was estimated that “about 76% of the generated municipal solid waste was collected, while the remainder was deposited in illegal dumps, drains, watercourses or

rivers. Among the collected waste, only about 1-2% was recycled, and the remainder was taken to disposal sites” (Mohamad Saib, 2004:3). In other words, over 20% of the waste generated remained uncollected and littered about, and there has hardly been any waste-materials sorted at-source. This explains the relatively low rate of recycling in Malaysia compared to 62% in Flanders, 47% in the Netherlands, 30% in the USA, and 15% in Japan (PSDC, 2004). Thus, one of the key aspects in the ongoing search for an improved management of waste was for the local authorities to take up the challenge of the 8MP inter alia “to introduce various initiatives and appropriate economic approaches such as incentives and collection charges, to reduce the amount of solid waste” (8MP: 550). Unfortunately, this was not taken up.

This study aims to reflect the potential use of various economic instruments in solid waste management, as to propose the most appropriate set of instruments in the case of a fast developing economy such as that of Malaysia.

Review of Appropriate Enviro-Economic Policy Instruments

As a federated nation-State like Malaysia is set to realize its Vision to be a developed country by the year 2020, it has to rise up at least to the 4th Challenge: “to establish a fully moral and ethical society...”, in order to ensure that “our valuable natural resources are not wasted; our land must remain productive and fertile; our atmosphere clear and clean; and our water unpolluted; ... the beauty of our land must not be desecrated,” (Malaysia, 1991:28).

However, ethics alone may work for some people, but not for all; as a reminder by George Orwell: “... on the whole, human beings want to be good, but not too good, and not quite all the time (Orwell, 1941 in Porter, 2002:10). Thus, Richard C. Porter argued: “...economic incentives, that is prices and taxes, can be devised as much to reinforce intrinsic moral motivation”, as “to

internalize the externality” by levying a tax equal to the marginal external cost, called a Pigovian tax after A.C. Pigou (Pigou, 1920 in Porter, 2002:7, 11).

A recent review by Jamal et al. (2001) of various enviro-economic policy measures and strategies adopted in both developed and developing economies indicates at least 13 instruments that have been put into place: “(i) product bans; (ii) packaging taxes; (iii) landfill taxes; (iv) household waste charges or packaging taxes-fees per bag”; (v) returnable disposal fees; (vi) taxes on virgin materials used; (vii) prohibitions on land-filling certain products; (viii) bottle deposits; (ix) voluntary or mandatory material separation; (x) recycled or recyclable labels on products; (xi) loans and technical assistance for recycling programs; (xii) public construction of incinerator plants; and (xiii) tax credits for recycling equipment and investment by private firms. The degree of effectiveness of every type of instrument in the US is reviewed by Porter (2002); in Germany, particularly on the waste-take-back policy; and in Japan, on the recycling programme by Moore et al. (1994). Essentially, the application of the instruments is targeted at various stakeholders, or “actors”: (i) producers; (ii) consumers; (iii) retailers; (iv) house or dwelling owners; (v) recyclers; (vi) waste contractors; (vii) financial-loan institutions; and (viii) the Government.

In Malaysia, the responsibility to manage waste rests with the Local Authorities: Cities and Municipalities by the Guidelines of the Ministry of Housing and the Local Government; and other non-urban or rural areas. This is carried out by the supervision of the Ministry of Health, through their appointed contractors, or as an interim measure, prior to the enactment of the pending Solid Waste Management Bill, through their respective designated concessionaires, namely, Idaman Bersih Sdn Bhd (formerly Northern Waste Industries), Alam Flora Sdn Bhd, Southern Waste Management Sdn Bhd, and Eastern Waste Management (Mohd Nazeri Salleh, 2001). Issues and problems that have arisen from the current practice were highlighted by

Jamaludin Md. Jahi (2001). The suggestions to address these issues were confined to institutional measures, but were short of recommending an application of economic instruments other than that “the residents be made to pay extra” for having generated more than an allowable amount of waste. Jamal et al. (2001:185-199) pointed out that the “deposit and refund” scheme was the most preferred policy instrument among 369 respondents of various socio-economic backgrounds, over two other competing instruments: “fee per bag”, and “tradable discharge permits”. But “the problem with all such deposit-refund systems is that they require a second waste collection that duplicates the first system” (Porter, 2002:210). Furthermore, the “deposit” is imposed on every purchaser, or consumer, whether or not one cares to “recycle”.

Proposed Socio-Enviro-Economic Policy Instrument: Indifferent Consumers-Pay

Principle

It is hereby argued and proposed that, those who care to recycle, do not have to leave a deposit-for-refund; and those who do not care, or are indifferent toward any recycling programmes or efforts, rather, have to pay a certain form of “levy” at predefined points of sales. Those who return unwanted items at designated collection centres are to be rewarded with “levy-equivalent credit points” that can be redeemed at the time of purchase of the controlled items or goods. The List of Controlled Goods, with Published Levy-Equivalent Credit Points, could be developed based on the nature and extent of various types of wastes being generated, or littered about, as per jurisdictional area of local authority.

The immediate effect of the proposed “Indifferent Consumers-Pay” (ICP) Principle, as well as its application as a socio-enviro-economic Policy Instrument, would be that, any litter on land, in the street, drains, streams, rivers, or in the sea, would be picked up by “poor” souls, since “waste” and “resources” are essentially the same substance, except in value (A. Bakar

Jaafar, 2001). In other words, the application of the proposed Principle has the effect of adding value to the “waste” substance, thus transforming it into a “resource”.

Envisaged Practices Drawn From the ICP-Principle

Waste generators would voluntarily sort items to be disposed-off into at least three major “material streams”: toxic, dry or not perishable, or wet or perishable, and deposit them to earn “credit points” with equivalent cash value at designated collection centres. The collection centres may either be fully manned, or fully automated, and are equipped with sorting-bins for different types of materials or recyclables such as metals (ferrous and non-ferrous), bottles and other glass, plastic, paper (magazines and newsprints), paper-boxes, and wood and timber, among others. Those who gather, sort, or deposit any toxics at the designated centres would earn premium credit points. All are encouraged to handle the perishables themselves at the source, either by composting the materials in their yards, or by a rapid bio-enzyme process in-situ. If not, such waste should be put out, as usual, for scheduled collection by local contractors or concessionaires for further regionalized resource recovery or treatment.

The immediate benefits of such a practice, waste-to-material sorting at source are as follows:

(i) the costs of sorting and collection to “appointed recyclers” for recyclables would be greatly reduced, since these costs are now shifted to waste generators who want to avoid paying the levy. The savings, in the cost of door-to-door collection alone, to the recyclers, can be as high as US\$ 123 per tonne, and in sorting, as high as US\$ 50 per tonne (Ackerman, 1997). In Malaysia, the savings can be as high as 60-70% of the total costs of managing solid waste by the current practice: door-to-door collection, transfer, and landfilling;

- (ii) the quality of the recyclables is maintained, not tainted nor damaged; and thus, can attract a premium value;
- (iii) as a result, the costs of producing new goods containing recyclables would be decreased;
- (iv) the frequency of door-to-door waste collection can be reduced if all perishables are composted or bio-digested at source. There is a premium for good quality compost in organic gardening or landscaping; and
- (v) the sorted “toxics” are now prevented into entering waste streams, and thus, the environment.

Once waste-materials are well-sorted out, and accumulated, they would require other supporting measures, including the following Policy instruments:

- (i) established “Recyclables-Exchange of Malaysia” (REM);
- (ii) consistent with the adoption of ISO 14000 standards, and other product-stewardship programmes, including Responsible-Care, manufacturers can now be required to produce new products containing recyclables, and are encouraged to go for eco-labelling;
- (iii) energy-materials that can no longer be recycled be utilized for power generation, for which, the waste-to-energy producers be given an attractive tariff and other fiscal incentives for the promotion of the renewable programme;
- (iv) Sorters for the “toxic wastes” be rewarded with premium credit points or equivalent monetary incentives, and such wastes be sent to prescribed resource recovery facilities, or toxic and hazardous waste concessionaires, for further treatment and repository;
- (v) any remaining waste-residues should not be landfilled, but rather deposited at managed-repository facilities for future use-options;
- (vi) the earned “credit points” are transferable, and can be traded in the secondary market;

(vii) to maintain the value of the credit-points, and to add value to those points, traded or otherwise, it is anticipated that the Government of Malaysia increase annually, after budget review and tabling in the Parliament, the extent of the levy imposed to those having not earned credit-points, which can be redeemed at points of sales of “controlled Goods”, under the Recycling Programme;

(viii) “the rate of recycling” within a state-constituency, or within a Federal-Territory, be introduced as a KPI of every Yang Berhormat, or even Yang Amat Berhormat; and

(ix) a Non-Private, Non-Profit Making Organization (Enviro-NP2O), with its Governance to oversee the collection of the levy into a Trust Fund, and its disbursement for promotional and supporting activities, including R&D, be established as the “driver” or “manager” of the above scheme of measures, as advocated earlier (A. Bakar Jaafar et al, 2002).

The only downside of the proposed solid waste management scheme, for Malaysia and perhaps, for other countries, would be an expected increase of petty theft, which can be overcome by tightening security measures in the following ways:

(i) every waste sorting and collection centre (WSCC) be fully manned, and even equipped with sophisticated recording and surveillance equipment; and

(ii) each item that is to be received at the WSCC be screened for “stolen” goods, and any suspect-carrier be required to declare his or her identity.

Policy Support

The proposed Policy, with its Scheme of policy measures, is in line with the current Outline Perspective Plan (OPP3): “... the Government will consider the adoption of a comprehensive waste management policy ... as well as to formulate strategies for waste reduction, reuse, and recycling.” (Malaysia, 2001:187); and in support of the provisions of the 8MP:

- (i) “The adoption of a comprehensive waste management policy to address the issues of waste reduction, reuse, and recycling”;
- (ii) “the conduct of relevant studies and demonstration projects to ascertain the viability and acceptability of a waste recycling industry”;
- (iii) “the introduction by local authorities of various initiatives and appropriate economic approaches such as incentives and collection charges to reduce the amount of household waste”;
- (iv) “A clearing house mechanism be established to facilitate industrial symbiosis, whereby an industry’s waste could be another’s resource.” (8MP:550).

Conclusion

The need for the Government of Malaysia to introduce a very specific socio-environmental Policy instrument based on the recently advanced “Indifferent Consumers-Pay Principle” (ICP), targeted first at “consumers”, with the support of “retailing business and commerce”, and secondly at “industrial producers”, would make a significant difference to current practices and approaches in solid waste management in the country. The experience of other countries in applying various other principles and policy instruments proves to be irrelevant in Malaysia, where enforcement is much to be desired. Discipline rather lacking; the suitable culture for recycling is yet to fully evolve; less “the will-to-pay” for common services, and thus, short of “political-will” and public finance. Thus, the generation of fund through the collection of the proposed “ICP Levy” would help support the expected non-profit making activities: policy review and studies, R&D, public information, education, awareness campaigns, training, and promotion of public-private partnership and participation.

The responsibility to manage the proposed Waste Management Scheme should rest with the proposed Non-Private, Non-Profit Organization for the Environment (Enviro-NP2O), which

should be incorporated by the Registrar of Company, rather than by the Registrar of Society. Only under such a management would it attract private investment to develop and finance the full-chain of waste sorting-to-materials, logistics, recyclables-exchange, waste-to-energy streams, and waste-residue repository. In short, as an alternative to carrying on only with the current 3R programme (Reduce, Reuse, and Recycle), the programme ought to be extended to the 5R Scheme (Reduce, Reuse, Recycle, Recovery of Energy and Materials, and Repository), and not landfilling.

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