

ABSTRACT

Electronic waste has been expanding rapidly in developing Asia and is predicted to grow to 12 million tonnes by 2020. The environmental and health issues resulting from poor management of this waste have become a concern among policy makers. A number of developing countries in Asia have been inspired by policy developments in Organization for Economic Cooperation and Development (OECD) countries, and have drafted legislations based on the principle of Extended Producer Responsibility (EPR). E-waste has been one of the fastest-growing waste streams in Malaysia since it is increasing at 40% each year, owing to an increase in consumption of electrical and electronic equipment.

EPR has been one of the most attractive E-waste management policies at different levels of society. A number of industrialized countries have established EPR systems for a wide range of electrical and electronic equipments(e-products), vehicles, household hazardous wastes, and etc. However, experiences from OECD and European countries have shown that effective implementation of EPR can be challenging despite being simple. Therefore, this study is aimed to look at the adoption of EPR in Electronic Industry in Malaysia and to study the level of awareness and knowledge among the public on EPR and E-waste.

The study also seeks to assess the level of awareness among the management staff of the industry and the practice of EPR among 10 selected electronic companies. Expertchoice software was used for this evaluation. The research

methodology for this study covers questionnaires/survey administered to the public and interview sessions.

Knowledge and awareness of public towards EPR and take-back programme have been significantly low. From the 200 respondents interviewed, 71% were not aware on such practices in Malaysia. Respondents prefer campaigns and exhibitions as their suggestive measures to increase level of awareness on EPR and take-back. All 10 companies interviewed have been practicing EPR efficiently. Data generated from Expertchoice show that Company F prioritizes Environmental stewardship (21%), Company G in Product Innovation (19%), Company B in Take-back (22%), Company E and H in Green marketing(21%), and Company C and D in Cost savings (22%) towards an effective EPR practice. As a conclusion, Company A and B have been the best in adopting the EPR practice based on all factors evaluated. Level of awareness and knowledge on EPR among management staff of the industry, as well as, public is at a moderate level. The education background and exposure in higher institutions have played an important role in educating the respondents on issues related to EPR and E-waste.

ABSTRAK

Sisa elektronik telah berkembang pesat dalam membangunkan Asia dan diramal meningkat kepada 12 juta metrik tan menjelang 2020. Sisa ini telah menjadi satu kebimbangan di kalangan pembuat dasar disebabkan isu-isu alam sekitar dan kesihatan akibat pengurusan yang kurang memuaskan. Beberapa negara membangun di Asia, telah diilhamkan oleh perkembangan dasar dalam negara-negara OECD, dan undang-undang telah digubal berdasarkan Prinsip Tanggungjawab Pengeluar Lanjutan (EPR). E-sisa telah menjadi salah satu daripada aliran sisa yang paling pesat berkembang di Malaysia kerana ia semakin meningkat 40% setiap tahun. Ini disebabkan oleh peningkatan dalam penggunaan peralatan elektrik dan elektronik.

Tanggungjawab Pengeluar Lanjutan (EPR) telah menjadi salah satu pengurusan dasar yang paling menarik pada tahap yang berbeza. Kebanyakan negara perindustrian telah mewujudkan sistem EPR untuk pelbagai peralatan elektrik dan elektronik (e-produk), kenderaan, bahan buangan isi rumah berbahaya, dan lain-lain. Namun demikian, pengalaman dari OECD dan negara-negara Eropah telah menunjukkan bahawa pelaksanaan berkesan EPR adalah mencabar walaupun mudah. Oleh itu, kajian ini bertujuan untuk melihat penggunaan EPR dalam Industri Elektronik di Malaysia dan untuk mengkaji tahap kesedaran dan pengetahuan di kalangan orang ramai terhadap EPR dan E-sisa. Kajian ini juga bertujuan untuk menilai tahap kesedaran di kalangan kakitangan pengurusan industri dan amalan EPR di kalangan 10 syarikat elektronik terpilih. Perisian Expertchoice telah digunakan untuk penilaian kajian ini. Metodologi bagi kajian ini meliputi soal selidik / kaji selidik yang diberikan kepada sesi awam dan temuduga dengan kakitangan pengurusan dari industri elektronik terpilih.

Dari kaji selidik awam yang dilakukan, keputusan telah menunjukkan bahawa pengetahuan dan kesedaran awam terhadap EPR dan program ambil- kembali adalah rendah. Daripada 200 responden yang ditemuramah, 71% daripada mereka masih tidak sedar mengenai amalan ini di Malaysia. Kebanyakan responden memilih kempen dan pameran sebagai langkah bagi meningkatkan tahap kesedaran mereka mengenai EPR dan Program ambil-balik. Kaji selidik syarikat menunjukkan bahawa kesemua 10 syarikat yang ditemuramah telah mengamalkan EPR dengan cekap. Data yang dijana daripada Expertchoice menunjukkan bahawa Syarikat F mengutamakan Pengawalan alam sekitar (21%), Syarikat G dalam Inovasi produk (19%), Syarikat B dalam Program ambil-balik (22%), Syarikat E dan H dalam Pemasaran hijau (21%), Syarikat C dan D dalam Penjimatan kos (22%) dan syarikat A dalam Kepuasan pelanggan dan kesetiaan (22%).

Sebagai kesimpulan, dua syarikat, Syarikat A dan B merupakan syarikat terbaik dalam mengamalkan amalan EPR berkesan berdasarkan semua faktor yang dinilai. Tahap kesedaran dan pengetahuan mengenai EPR di kalangan kakitangan pengurusan industri serta golongan awam adalah pada tahap yang sederhana. Latar belakang pendidikan serta pendedahan meluas di institusi pengajian tinggi telah memainkan peranan penting dalam mendidik responden mengenai isu-isu yang berkaitan dengan EPR dan sisa elektronik.

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