DETERMINANTS FOR SUSTAINABILITY OF BIODEGRADABLE PLASTICS: A SEQUENTIAL EXPLORATORY MIXED METHODS STUDY

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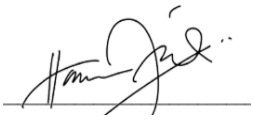

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ABSTRAK

Bahan biodegradasi boleh menggantikan plastik tradisional yang diperbuat daripada petroleum dan membantu penciptaan produk yang lebih mesra alam. Ianya boleh digunakan dalam pelbagai aplikasi, termasuk untuk bahan pembungkusan, plastik sampah, produk katering, bekas makanan, kertas laminate, tee golf, peralatan pembersihan dan peralatan pertanian. Ciri utama produk biodegradasi adalah ianya mudah terurai kepada sesuatu yang tidak merbaya dalam tempoh masa tertentu melengkapi kitaran hayatnya. Walaubagaimanapun, penggunaan plastik biodegradasi perlu disebarkan dengan lebih meluas untuk menyakinkan pengguna, pengeluar, dan pihak berkuasa tentang keberkesanannya. Satu kajian telah dijalankan untuk mengkaji faktor-faktor yang mempengaruhi kelestarian plastik biodegradasi. Kajian ini dijalankan menggunakan kaedah campuran, bermula dengan penyelidikan kualitatif dengan melibatkan kajian kes dengan pertubuhan bukan kerajaan, agensi kerajaan dan pengeluar plastik biodegradasi. Dapatan dari kajian kualitatif mendedahkan bahawa kedua-dua faktor organisasi dan individu memainkan peranan penting dalam menentukan kelestarian plastik biodegradasi. Model ini telah mengabungkan beberapa teori iaitu, teori perilaku terencana, pendekatan tiga aspek utama, teori perilaku pembelian hijau, teori pengaktifan norma, dan teori nilai-keyakinan-norma. Bagi mengumpul data kajian, borang soal selidik telah diedarkan secara dalam talian kepada pengguna plastik di Malaysia yang berumur 15 tahun dan ke atas. Sebanyak 316 respons telah dianalisis menggunakan sistem analisia PLS-SEM. Sebahagian dari dapatan kajian menyokong model yang telah dibina ini. Penemuan kajian ini mempunyai implikasi teori bagi penyelidikan plastik biodegradasi di pasaran yang sedang membangun. Dapatan kajian juga, mencadangkan bahawa ciri individu sangat mempengaruhi kelestarian plastik biodegradasi dan merupakan faktor penting dalam menentukan niat tingkah laku yang berkaitan dengan kelestarian, seperti membeli produk makanan dengan pembungkusan mesra alam. Kajian ini juga memberikan implikasi praktikal kepada sektor kerajaan dan korporat untuk mereka membentuk strategi berkesan yang akan menggalakkan pengguna memilih plastik biodegradasi. Kempen kesedaran yang kerap perlu dilakukan bagi menggalakan pengguna menggunakan plastik biodegradasi dan meningkatkan kesedaran pengguna terhadap alam sekitar sekaligus mengurangkan penggunaan pembungkusan tidak mesra alam di sektor awam. Pembuat dasar boleh menggunakan kempen sosial yang menumpukan kepada identiti alam sekitar untuk secara perlahan mengubah niat dan tingkah laku yang berhubungan dengan kelestarian dan menggalakkan penggunaan plastik biodegradasi. Organisasi juga boleh memasukkan identiti alam sekitar dan penyertaan dalam komunikasi pemasaran mereka untuk meningkatkan kesedaran tentang produk biodegradasi dan menambahbaik persepsi orang awam.

ABSTRACT

Biodegradable materials can replace traditional plastics made from petroleum and help create more environmentally friendly products. They can be used in various applications, including packaging materials, garbage bags, catering items, food containers, laminating papers, golf tees, sanitary items, and agricultural applications. The key characteristic of biodegradable products is that they can break down into harmless substances over a specific period of time, completing their life cycle. However, for the widespread adoption of biodegradable plastics, it is essential to convince consumers, manufacturers, and regulators about their effectiveness. A study was conducted to investigate the factors influencing the sustainability of biodegradable plastics. The study followed a mixed-method approach, starting with qualitative research involving case studies with non-governmental organizations, government agencies, and biodegradable plastic producers. The qualitative research revealed that both organizational and individual factors play a significant role in determining the sustainability of biodegradable plastics. This led to the development of a conceptual research model. The model integrated several theories, such as the theory of planned behaviour, triple bottom line, the theory of green purchase behaviour, the norm activation theory, and the value-belief-norm theory. To gather data for the study, questionnaires were distributed online to plastic users in Malaysia who were 15 years old and above. A total of 316 responses were analyzed using PLS-SEM analysis. The results partially supported the research model. The study's findings have theoretical implications for biodegradable plastics research in developing markets. They also suggest that individual characteristics strongly influence the sustainability of biodegradable plastics and are important factors in determining behavioural intentions related to sustainability, such as purchasing environmentally friendly packaged food products. The study provides practical implications for government and corporate sectors to design effective strategies encouraging consumers to choose biodegradable plastics. Regular awareness campaigns should be conducted to increase consumer engagement in environmental concerns and reduce the use of non-eco-friendly packaging in the public sector. Policymakers can utilize social campaigns that focus on environmental self-identities to gradually shift sustainability behavioural intentions and promote the use of biodegradable plastics. Organizations can also incorporate environmental self-identity and participation in their marketing communications to raise awareness about biodegradable products and improve public perception.

LIST OF PUBLICATIONS AND AWARD

1. Moshood, T. D., Nawanir, G., Mahmud, F., Mohamad, F., Ahmad, M. H., AbdulGhani, A., & Kumar, S. (2022). Green product innovation: A means towards achieving global sustainable product within biodegradable plastic industry. ***Journal of Cleaner Production***, 132506. ***(Q1)*** *Indexed in Web of Science, SCOPUS, and* ***Impact Factor:11.072, (Published) Elsevier.***

2. Moshood, T. D., Nawanir, G., Mahmud, F., Mohamad, F., Ahmad, M. H., & AbdulGhani, A. (2022). Why do consumers purchase biodegradable plastic? The impact of hedonics and environmental motivations on switching intention from synthetic to biodegradable plastic among the young consumers. ***Journal of Retailing and Consumer Services***, *64*, 102807. ***(Q1)*** *Indexed in Web of Science, SCOPUS, and* ***Impact Factor:10.972, (Published) Elsevier.***

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