

THE ROLE OF MICROPLASTICS IN BUSINESS:

PERCEPTIONS AND ACTIONS

David Rylander, Texas Woman's University

EXTENDED ABSTRACT

Humans have produced over eight billion tons of plastic, and an estimated 14 million tons of plastic enter our oceans each year (Woodward 2019). Businesses and consumers are largely aware of the pollution problems from plastic, but they are just recently learning more about the danger of microplastics. Microplastics are particles of plastic .5 – 5 mm in length and have been found in everything from water to air to animals and human excrement. Microplastics are used in all types of products, including cosmetics and clothing, and they are also generated from regular plastic packaging and products (Stephenson 2018).

Studies have examined attitudes and behaviors regarding plastic bags (Ari and Yilmaz 2017) and impact of reusable bags on purchase behavior (Karmarkar and Bollinger 2015), but there is little or no research on business actions and consumer attitudes toward microplastics. Several businesses are trying to reduce plastic use, and some are even addressing the microplastic problem, but awareness is low in comparison to other environmental hazards (Ahlström 2018). This is a significant topic due to so many packaging and product components containing microplastics or capable of producing microplastics (Pontes and Nemeshanyi 2019). As consumers become more concerned about pollution and health, microplastic management could be a high-impact way for businesses to improve their environmental sustainability and appeal to the desires of consumers. Manufacturers are also becoming more liable for end-of-life management/disposal through extended producer responsibility actions (Turaga et al. 2019).

Given the paucity of knowledge about microplastics and their potential effects (Stephenson 2018), this research study seeks to discover consumer awareness and attitudes regarding microplastics, along with possible business responses to reduce microplastic waste and develop messages to appeal to consumers. Research questions include: (1) What are consumers' levels of awareness and responses to microplastic issues? (2) How are businesses responding to the growing problem of microplastic waste? (3) What actions and messages regarding microplastics will appeal to consumers?

The first research question will be addressed with a survey of consumers to detect levels of awareness of microplastics, where microplastics can be found, and harmful effects of microplastics. This part of the study will be an exploratory look using scale items borrowed from similar research on consumer attitudes and behaviors toward environmental issues (e.g., Arli et al. 2017; Pawaskar et al. 2018; Robinot and Giannelloni 2009; Vasiljevic-Shikaleska et al. 2018). The

second research question will be addressed with a case-based look at companies that are actively attacking the problem (e.g., SC Johnson), including their actions to reduce microplastics and their messaging to consumers. This will include some alternative solutions to reducing microplastics (e.g., Foschi and Bonoli 2019; Nguyen and Billen 2017; Paletta et al. 2019). The third research question will be addressed with the previously mentioned survey of consumers. Consumers will be asked to react to various actions and messages from businesses.

Findings from this exploratory study will offer evidence of consumer awareness and attitudes toward microplastics, and businesses will have some better ideas for how to address microplastic problems in their supply chains and how to communicate most effectively to consumers about microplastics.

REFERENCES

- Ahlström, T. (2018). How a business can kick out microplastics. *WeDontHaveTime Climate Conference* Keynote, Sept. 10, np.
- Ari, E. & Yilmaz, V. (2017). Consumer attitudes on the use of plastic and cloth bags. *Environment, Development & Sustainability*, 19(4), 1219-1234.
- Arli, D., Tan, L.P., Tjiptono, F., & Yang, L. (2018). Exploring consumers' purchase intention towards green products in an emerging market: The role of consumers' perceived readiness. *International Journal of Consumer Studies*, 42(4), 389-401.
- Foschi, E. & Bonoli, A. (2019). The commitment of packaging industry in the framework of the European strategy for plastics in a circular economy. *Administrative Sciences*, 9(1), 18-18.
- Karmarkar, U.R. & Bollinger, B. (2015). BYOB: How bringing your own shopping bags leads to treating yourself and the environment. *Journal of Marketing*, 79(4), 1-15.
- Nguyen, L. & Billen, P. (2017). A review of four publications on the sustainability and potential of plastic alternatives. *Journal of Industrial Ecology*, 21(5), 1380-1381.
- Paletta, A., Leal Filho, W., Balogun, A., Foschi, E. & Bonoli, A. (2019). Barriers and challenges to plastics valorization in the context of a circular economy: Case studies from Italy. *Journal of Cleaner Production*, 241(Dec), np.
- Pawaskar, U.S., Raut, R.D., & Gardas, B.B. (2018). Assessment of consumer behavior towards environmental responsibility: A structural equations modeling approach. *Business Strategy & the Environment*, 27(4), 560-571.
- Pontes, M. & Nemeshanyi, E. (2019). Microplastics: How should business respond? *Earthwatch*.
- Robinot, E. & Giannelloni, J. (2009). Attitude toward environmentally friendly hospitality management: A measurement scale. *Research and Applications in Marketing*, 24(2), 29-50.
- Stephenson, P. (2018). Microplastics: Small plastics, big problem. *Eco-Business.com*, June 5, np.
- Turaga, R.M.R. & Bhaskar, K. (2019). E-waste management in India: Issues and strategies. *Journal for Decision Makers*, 44(3), 127-162.
- Vasiljevic-Shikaleska, A., Trpovski, G. & Gjozinska, B. (2018). Environmental awareness and of pro-environmental consumer behavior. *Journal of Sustainable Development*, 8(20), 4-17.
- Woodward, A. (2019). Scientists have created magnetic coils thinner than a human hair that could break down plastic in the ocean. *Business Insider*, Aug. 2, np.