

GREEN PURCHASE BEHAVIOR: A SYSTEMATIC REVIEW

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ABSTRACT

Environmental sustainability is one of today's most urgent concerns, on which human consumption is considered to have substantial impact. As a result of the ecosystems' over-exploitation, the world faces unprecedented consequences such as greenhouse effects, climate change, wildlife extinction, air, soil and water pollution (Barbarossa and de Pelsmacker, 2016; Liobikienė *et al.*, 2016; Rausch and Kopplin, 2021). The change into sustainable consumption constitutes a fundamental opportunity for reducing our impact and for economic growth, as the emerging consciousness increase the demand for green product innovations (Han *et al.*, 2017; Olson, 2013). As a long trail of theories explores the motives behind this complex phenomenon, many of the evidence point towards a significant gap between consumer concerns and actual behavior, with many studies only able to predict purchase intention, as further confirmed in a set of eight systematic reviews and meta-analysis (Bamberg and Möser, 2007; Groening *et al.*, 2018; Klöckner, 2013; Li *et al.*, 2019; Loureiro *et al.*, 2021; Ravis *et al.*, 2009; Sheppard *et al.*, 1988), which together encompass 292 different data tests, a combined sample of 59,550 observations and over 1,100 peer-reviewed documents.

Aiming to tackle this well-documented gap, a systematic review was conducted using (Christofi *et al.*, 2017; Tranfield *et al.*, 2003). Our objective is to contribute towards a better understanding of what drives Actual Green Purchase Behavior (AGPB) by: (i) gathering a comprehensive collection of meaningful contributions; (ii) discussing emerging trends, dominant latent topics and constructs; (iii) synthesizing the main findings, gaps and contradictions. Database search for English peer-reviewed articles, was completed across all related business, social and environmental sciences on Scopus/Web of Science (WoS), not restricted to any specific publication period.

Database	Search strings	Potentially relevant articles	Combined set	Extracted for selection	Identified in final analysis
WoS	Related with PEB/GPB	1,893	595	777	183
	Related with determinant factors	12,745			
	Environmental-science journals	251	251		
Scopus	Related with PEB/GPB	13,415	623		
	Related with determinant factors	20,544			

Table 1. Results from database search.

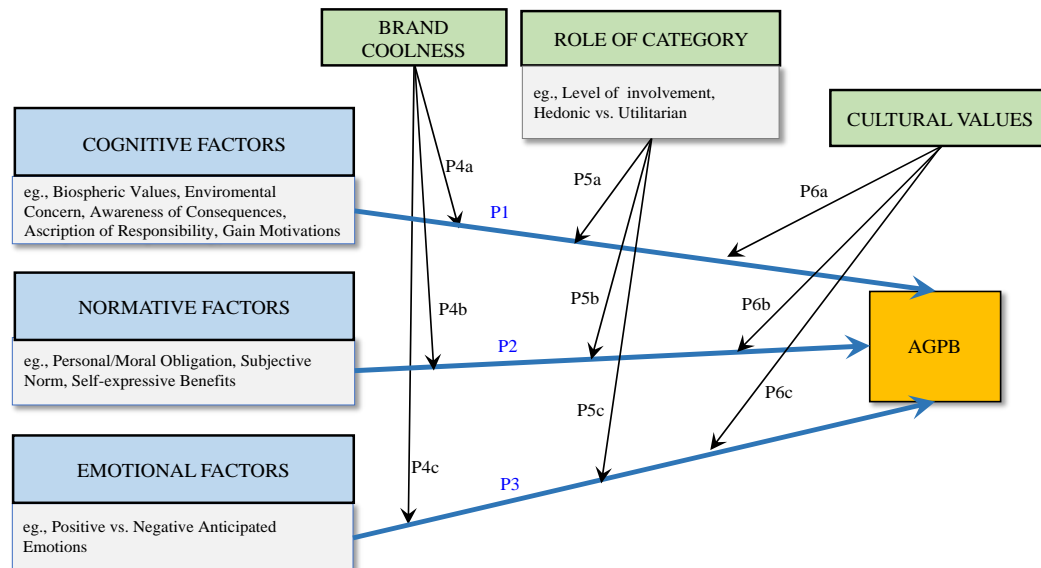
In the initial set, 777 articles were extracted, after merging databases and removing duplicates. This number was reduced to 183 by the processes of title, abstract screening, and full-text reading. Final selection criteria were adapted from literature (Loureiro et al., 2021): (i) article fit with the research goals; (ii) robust use and development of theory within present literature; (iii) logical theory-methods-data flow; (iv) relevance of practical and theoretical contributions.

The theories of Planned Behavior, Value-Belief-Norm and Norm Activation are the most influential, with their appropriateness verified across a widely diverse of PEB activities, mainly using quantitative methods. Despite the sizeable trail of research using these rational-based models, concerns are raised about their sufficiency (Liang *et al.*, 2019; Perugini and Bagozzi, 2001; Sheppard *et al.*, 1988) and thus additional influencers are suggested for further research, yet to be integrated and validated empirically into a single conceptual model.

Three main types of concepts are identified as able to drive AGPB: cognitive, normative and emotional factors. Possessing a high level of knowledge has been found to exert influence on green behavioral processes (Rausch and Kopplin, 2021), which seems to be interconnected with the notion of environmental care (Policarpo and Aguiar, 2020) and with evaluating the perceived sum of benefits (Hamzah and Tanwir, 2021; Rezvani *et al.*, 2018). On the other hand, the debate between altruistic norms and complying with socially appropriate forms of conduct, is one the main topics of discussion, with both personal and social norms described as strong motivational basis for behavior context (de Leeuw *et al.*, 2015; Stern, 2000). Moreover, addressing the lower predictive value of cognitive and normative constructs, when attempting to explain actual behavior instead of intention, recent evidence suggests that the influence of emotions can outweigh cognitions (Liang *et al.*, 2019) – or better yet, complement them - and ignite consumer decision making (Bagozzi *et al.*, 1999; Han *et al.*, 2018). Affective beliefs provide the required motivational content (Bechara *et al.*, 2000; Perugini and Bagozzi, 2001) to trigger individual's action, as also supported by neuroscience. Based on the present discussion, we propose the following propositions: **P1:** Cognitive factors are positively associated with AGPB; **P2:** Normative factors are positively associated with AGPB; **P3:** Emotional factors are positively associated with AGPB.

Additional factors were found to influence AGPB, such as the coolness of brands, the role of category and cultural values. Regarding brand coolness, its role in activating *passionate desire* is demonstrated in the context of luxury fashion brands (Loureiro *et al.*, 2020) and established as a positive quality, related to how brand personality resonates to consumers. Its specific dimensions were revealed and tested in cross-country studies, through an empirically confirmed scale (Warren *et al.*, 2019). The role of category is another factor to examine (Liobikienė *et al.*, 2016; Rezvani *et al.*, 2018), with evidence of consumer response to vary accordingly across three distinct categories of sustainable products (Rahman, 2018).

Furthermore, it seems appropriate to assume that most aspects of consumer behavior are culture bound (de Mooij and Hofstede, 2011). Based on those findings, we suggest that: **P4**: Brand Coolness moderate the relationship between Cognitive (4a), Normative (4b), Emotional factors (4c) and AGPB; **P5**: Product Category role moderate the relationship between Cognitive (5a), Normative (5b), Emotional factors (5c) and AGPB; **P6**: Cultural Values moderate the relationship between Cognitive (6a), Normative (6b),



Emotional factors (6c) and AGPB.

Figure 1: Conceptual framework

In summary, we argue that scientific knowledge and sustainable marketing fields would benefit from examining actual behavior, instead of purchase intentions, as a complex structure of barriers, motivations and intervening factors may be influencing (or blocking) the conversion of environmental concerns and attitudes into actions.

For that effect, this study is unique because it explores an original set of topics, reviewing, and categorizing an unprecedented collection of suitable contributions from behavioral science, environmental and management literature. Based on the main theoretical arguments and empirical evidence available, we have uncovered the key elements which we believe can explain actual green purchase behavior. A new conceptual framework is proposed, which is - to be the best of our knowledge - the first to combine emotional, cognitive, and normative processes, while integrating new moderator effects often suggested in recent literature.

We expect to assist researchers in conceptualizing different means of influencing sustainable consumer behavior and to stimulate future research, which can further explore and test the propositions here suggested, for a more comprehensive perspective on this domain. Moreover, new implications will be shared for the implementation of more effective managerial practices, communication strategies, social

marketing campaigns and community interventions, for both business and non-for-profit organizations, useful for a diverse group of stakeholders such as policy makers, corporate and opinion leaders.

Finally, we hope that our study can serve as a resource for both academic researchers and marketing practitioners seeking to further understand and advance the field of green marketing. Marketing plays a large role in influencing individual concerns and commitment with reducing impact on the environment, and thus can promote the achievement of customer needs, business goals and sustainable development at same time, without compromising among them, re-defining its own role, and embracing the new paradigm as opportunity for a more viable future.

Keywords: pro-environmental behavior, green purchase behavior, green products, sustainability, systematic review, cognitive, emotions, norms, cultural values, brand coolness

REFERENCES

- Bagozzi, R.P., Gopinath, M. and Nyer, P.U. (1999), "The Role of Emotions in Marketing", *Journal of the Academy of Marketing Science*, Vol. 27 No. 2, pp. 184–206.
- Bamberg, S. and Möser, G. (2007), "Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour", *Journal of Environmental Psychology*, Vol. 27 No. 1, pp. 14–25.
- Barbarossa, C. and de Pelsmacker, P. (2016), "Positive and Negative Antecedents of Purchasing Eco-friendly Products: A Comparison Between Green and Non-green Consumers", *Journal of Business Ethics*, Vol. 134 No. 2, pp. 229–247.
- Bechara, A., Damásio, H. and Damásio, A.R. (2000), "Emotion, Decision Making and the Orbitofrontal Cortex", *Cerebral Cortex*, Vol. 10, pp. 295–307.
- Christofi, M., Leonidou, E. and Vrontis, D. (2017), "Marketing research on mergers and acquisitions: a systematic review and future directions", *International Marketing Review*, Vol. 34 No. 5, pp. 629–651.
- Groening, C., Sarkis, J. and Zhu, Q. (2018), "Green marketing consumer-level theory review: A compendium of applied theories and further research directions", *Journal of Cleaner Production*, Vol. 172, pp. 1848–1866.
- Hamzah, M.I. and Tanwir, N.S. (2021), "Do pro-environmental factors lead to purchase intention of hybrid vehicles? The moderating effects of environmental knowledge", *Journal of Cleaner Production*, Vol. 279, available at: <https://doi.org/10.1016/j.jclepro.2020.123643>.
- Han, H., Hwang, J. and Lee, M.J. (2017), "The value–belief–emotion–norm model: investigating customers' eco-friendly behavior", *Journal of Travel & Tourism Marketing*, Vol. 34 No. 5, pp. 590–607.
- Han, H., Olya, H.G.T., Kim, J. (Jenny) and Kim, W. (2018), "Model of sustainable behavior: Assessing cognitive, emotional and normative influence in the cruise context", *Business Strategy and the Environment*, Vol. 27, pp. 789–800.
- Klößner, C.A. (2013), "A comprehensive model of the psychology of environmental behaviour-A meta-analysis", *Global Environmental Change*, Vol. 23 No. 5, pp. 1028–1038.
- de Leeuw, A., Valbois, P., Ajzen, I. and Schmidt, P. (2015), "Using the theory of planned behavior to identify key beliefs underlying pro-environmental behavior in high-school students: Implications for educational interventions", *Journal of Environmental Psychology*, Vol. 42, pp. 128–138.
- Li, D., Zhao, L., Ma, S., Shao, S. and Zhang, L. (2019), "What influences an individual's pro-environmental behavior? A literature review", *Resources, Conservation and Recycling*, Vol. 146, pp. 28–34.
- Liang, D., Hou, C., Jo, M.S. and Sarigöllü, E. (2019), "Pollution avoidance and green purchase: The role of moral emotions", *Journal of Cleaner Production*, Vol. 210, pp. 1301–1310.
- Liobikienė, G., Mandravickaitė, J. and Bernatoniienė, J. (2016), "Theory of planned behavior approach to understand the green purchasing behavior in the EU: A cross-cultural study", *Ecological Economics*, Vol. 125, pp. 38–46.

- Loureiro, S.M.C., Guerreiro, J. and Han, H. (2021), "Past, present, and future of pro-environmental behavior in tourism and hospitality: a text-mining approach", *Journal of Sustainable Tourism*, available at: <https://doi.org/10.1080/09669582.2021.1875477>.
- Loureiro, S.M.C., Jiménez-Barreto, J. and Romero, J. (2020), "Enhancing brand coolness through perceived luxury values: Insight from luxury fashion brands", *Journal of Retailing and Consumer Services*, Vol. 57, available at: <https://doi.org/10.1016/j.jretconser.2020.102211>.
- de Mooij, M. and Hofstede, G. (2011), "Cross-cultural consumer behavior: A review of research findings", *Journal of International Consumer Marketing*, Vol. 23 No. 3–4, pp. 181–192.
- Olson, E.L. (2013), "It's not easy being green: The effects of attribute tradeoffs on green product preference and choice", *Journal of the Academy of Marketing Science*, Vol. 41 No. 2, pp. 171–184.
- Perugini, M. and Bagozzi, R.P. (2001), "The role of desires and anticipated emotions in goal-directed behaviours: Broadening and deepening the theory of planned behaviour", *British Journal of Social Psychology*, Vol. 40, pp. 79–98.
- Policarpo, M.C. and Aguiar, E.C. (2020), "How self-expressive benefits relate to buying a hybrid car as a green product", *Journal of Cleaner Production*, Vol. 252, available at: <https://doi.org/10.1016/j.jclepro.2019.119859>.
- Rahman, I. (2018), "The Interplay of Product Involvement and Sustainable Consumption: An Empirical Analysis of Behavioral Intentions Related to Green Hotels, Organic Wines and Green Cars", *Sustainable Development*, Vol. 26 No. 4, pp. 399–414.
- Rausch, T.M. and Kopplin, C.S. (2021), "Bridge the gap: Consumers' purchase intention and behavior regarding sustainable clothing", *Journal of Cleaner Production*, Vol. 278, available at: <https://doi.org/10.1016/j.jclepro.2020.123882>.
- Rezvani, Z., Jansson, J. and Bengtsson, M. (2018), "Consumer motivations for sustainable consumption: The interaction of gain, normative and hedonic motivations on electric vehicle adoption", *Business Strategy and the Environment*, Vol. 27, pp. 1272–1283.
- Rivis, A., Sheeran, P. and Armitage, C.J. (2009), "Expanding the Affective and Normative Components of the Theory of Planned Behavior: A Meta-Analysis of Anticipated Affect and Moral Norms", *Journal of Applied Social Psychology*, Vol. 39, pp. 2985–3019.
- Sheppard, B.H., Hartwick, J. and Warshaw, P.R. (1988), "The Theory of Reasoned Action: A Meta-Analysis of Past Research with Recommendations for Modifications and Future Research", *Journal of Consumer Research*, Vol. 15 No. 3, p. 325.
- Stern, P.C. (2000), "Toward a Coherent Theory of Environmentally Significant Behavior", *Journal of Social Issues*, Vol. 56 No. 3, pp. 407–424.
- Tranfield, D., Denyer, D. and Smart, P. (2003), "Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review", *British Journal of Management*, Vol. 14, pp. 207–222.
- Warren, C., Batra, R., Loureiro, S.M.C. and Bagozzi, R.P. (2019), "Brand Coolness", *Journal of Marketing*, Vol. 83 No. 5, pp. 36–56.