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Michael Lieder, Farazee M.A. Asif, Amir Rashid, Aleš Mihelič, Simon Kotnik



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Title

A conjoint analysis of circular economy value propositions for consumers: using “washing machines in Stockholm” as a case study

Authors

Michael Lieder^a, Farazee M.A. Asif^a, Amir Rashid^{a,*}, Aleš Mihelič^b, Simon Kotnik^c

Michael Lieder
e-mail: lieder@kth.se

Farazee M.A. Asif
e-mail: aasi@kth.se

*Corresponding author:
Amir Rashid
e-mail: amirr@kth.se
phone: +46 8 790 63 73

Aleš Mihelič
e-mail: ales.mihelic@gorenje.com

Simon Kotnik
e-mail: simon.kotnik@gorenje.com

^aDepartment of Production Engineering, KTH Royal Institute of Technology, Brinellvägen 68, SE-100 44 Stockholm, Sweden

^bR&D Competence Centre Laundry Care, Gorenje d.d., Partizanska 12, SI- 3320 Velenje, Slovenia

^cJoint R&D Centre, Gorenje d.d., Partizanska 12, SI- 3320 Velenje, Slovenia

Abstract

Background: In industrial practice a transition from a linear (take-make-dispose) to a circular product system (considering reuse/remanufacturing/recycling) requires the change of business models through new value propositions. In doing so the focus of the value proposition shifts from selling a physical product to providing access to functionality through business innovation. One key factor related to circular business transitions is market acceptance. It is particularly challenging to understand what complexity a new concept like circular economy (CE) brings to established businesses where the success and the failure of the business is dependent on customer's acceptance of new value propositions.

Purpose: This paper empirically explores the opportunities of a circular business approach for washing machines in the city of Stockholm by quantifying and assessing customer preferences for CE value propositions for a business to customer (B2C) scenario.

Method: This study uses the method of choice-based conjoint analysis to investigate preferences based on the attributes price and payment scheme, environmental friendliness as well as service level.

Originality: This paper is the first of its kind to assess customer preferences from the CE market acceptance point of view using a conjoint approach and provides insight to what extent new CE value propositions may be adopted.

Findings: Results indicate that there is general interest in paying for access rather than for ownership. Service levels have the strongest impact on customer utility of a washing machine offer. If associated with reduction in CO₂ emissions the number of remanufacturing cycles can increase purchase probability. As a method choice-based conjoint analysis is highlighted as beneficial to break down CE value propositions and to identify to what extent particular service-related attributes and product-related attributes contribute to overall customer utility.

Keywords

Circular Economy; Customer preferences; Customer acceptance; Business models; Conjoint analysis; Washing machines

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