



# CUSTOMER ADOPTION TOWARDS CIRCULAR BUSINESS MODELS

## An empirical case analysis of Circular Furniture in the city of Leeuwarden

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### Background

Every year, businesses and consumers in EU Member States produce 10 million tons of furniture trash, the majority of which is built to end up in landfills or to be burned. The consumption of resources and waste production within the furniture sector cause a problem which underlines the relevance of circular business models (CBM) offering a viable way to address those issues. For the successful implementation of CBM it is important to understand the role of the customer.

### Objective

This study investigates the CBM of the start-up Circular Furniture in the City of Leeuwarden with the aim to answer the following research question:

**Which individual determinants foster the customer adoption towards circular business models considering the case 'Circular Furniture' in the city of Leeuwarden?**

### Methods

- Collection of primary data using a survey
- Quantitative data analysis

### Regression model equations

Model 1:  
 $\hat{y}_{INT} = Intercept + b_1 \cdot x_{EAG} + b_2 \cdot x_{EAC} + b_3 \cdot x_{ATT} + b_4 \cdot x_{WPP} + b_5 \cdot x_{SV} + b_6 \cdot x_{FV} + b_7 \cdot x_{EV} + b_8 \cdot x_{Origin}$

Model 2:  
 $\hat{y}_{INT} = Intercept + b_1 \cdot x_{EAG} + b_2 \cdot x_{EAC} + b_3 \cdot x_{ATT} + b_4 \cdot x_{WPP} + b_5 \cdot x_{SV} + b_6 \cdot x_{FV} + b_7 \cdot x_{EV} + b_8 \cdot x_{Origin} + b_9 \cdot (x_{WPP} \cdot x_{Income})$

Model 3:  
 $\hat{y}_{BH} = Intercept + b_1 \cdot x_{INT}$

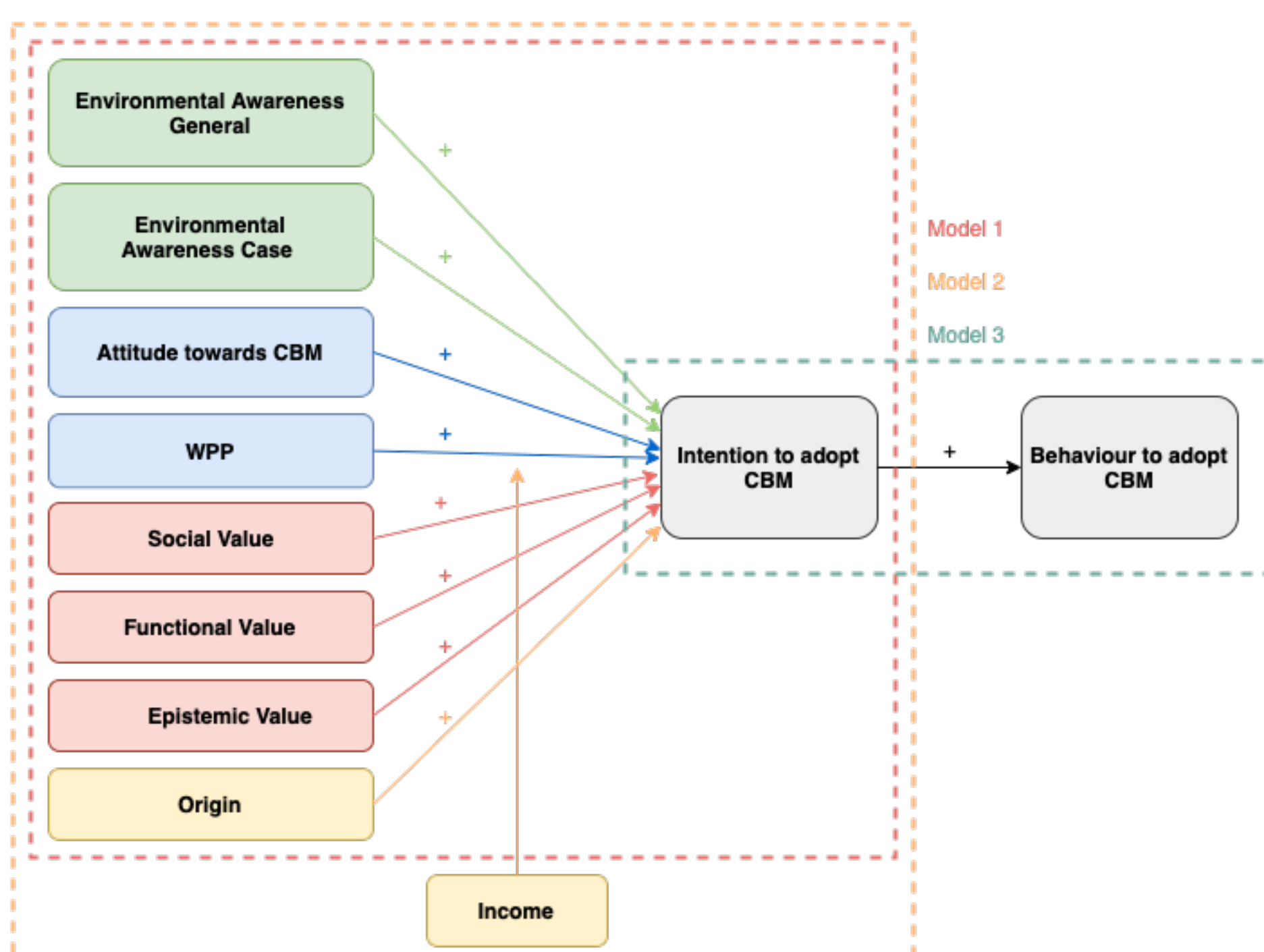


Figure 1. Research model & Visualisation of the three regression models

### References

- Mostaghel, R., & Chirumalla, K. 2021. Role of customers in circular business models. Journal of Business Research, 127: 35–44.
- Forrest, A., Hilton, M., Ballinger, A., & Whittaker, D. 2017. Circular Economy Opportunities in the Furniture Sector. European Environmental Bureau, 55.
- Koch, V. 2017. Circular economy in the furniture industry—11092018. EU FURN360, 51.

### Results

#### Demographics

- Average age 22.27 years
- Origin range:
  - 29 nationalities (39.2% Dutch, 60.8% international students)
- Income:
  - 90% of participants had a monthly income between 0 and 1500€

#### Regression analysis

Hypothesis		Result
H1+	The higher the customer's general environmental awareness the higher the intention to adopt CBMs.	Supported ✓
H2+	The higher the customer's case related environmental awareness the higher the intention to adopt CBMs.	Not supported
H3+	The higher the customer's attitude the higher the intention to adopt CBMs.	Not supported
H4+	The higher the customer's willingness to pay premium the higher the intention to adopt CBMs.	Supported ✓
H5+	The higher the customer's social value the higher the intention to adopt CBMs.	Not supported
H6+	The higher the customer's functional value the higher the intention to adopt CBMs.	Supported ✓
H7+	The higher the customer's epistemic value the higher the intention to adopt CBMs.	Not supported
H8+	International students are more likely than Dutch students to have a higher intention to adopt the particular CBM.	Supported ✓
H9+	The effect of customer's WPP on the intention to adopt CBMs is moderated by the personal characteristic income.	Not supported
H10+	The higher the customer's intention to adopt CBMs the higher the adoption of CBMs.	Supported ✓

Table 1. Results

### Conclusion & Summary

This study investigated the circular business model (CBM) of the start-up Circular Furniture with the aim to identify which individual determinants foster their customer adoption. While answering the research question, this study added to the current literature in the field of circular economy and consumer behaviour. The research model was based on the ethical purchase behaviour framework by Mostaghel and Chirumalla (2021) and as a result of the literature research adapted to the given case. Primary data from 177 students was collected and a quantitative analysis conducted. Hereby, the aspects willingness to pay premium, general environmental awareness, functional value, and international origin have a positive, significant influence on the intention to adopt CBM. Therefore, a higher willingness to pay, being more environmentally conscious, perceiving a functional value in the system and coming from abroad result in a higher intention and later higher adoption of CBM. The start-up should focus on those determinants in its communication and educate customers on the negative ecological impact of the furniture industry.

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