

The role of the new environmental paradigm scale on the WTP and WTW for e-commerce deliveries

The new environmental paradigm scale - What is it?

The **New Environmental Paradigm Scale (NEPS)** is a psychometric tool used to assess individuals' pro-environmental attitudes. It is based on five key dimensions: **limits to growth**, **anti-anthropocentrism**, **nature's fragility**, **rejection of human exceptionalism**, and **recognition of ecological crises**. The scale includes 15 statements, and a higher overall score reflects a stronger ecological orientation.

Methodology

- **Online survey** – 299 valid responses (Wallonia, Belgium)
- **NEP scale** – Measures ecological worldview (15 items)
- **PCA + Linear Regressions** – Analyze how NEP components influence delivery preferences

Willingness To Wait (WTW) for eco-delivery

- **Consumer readiness to accept longer delivery times** in exchange for more environmentally friendly shipping options that reduce carbon emissions.
- **Hypothesis H1** suggests that individuals with higher environmental sensitivity (NEPS score) are more willing to wait longer for eco-friendly delivery options.

Willingness To Pay (WTP) for eco-delivery

- Consumer readiness to pay extra for environmentally friendly delivery services that minimize negative environmental impacts.
- **Hypothesis H2** suggests that individuals with higher environmental sensitivity (NEPS score) are more willing to pay a surcharge for eco-friendly delivery options.

Willingness To Pay (WTP) for express delivery

- Consumer readiness to pay more for faster delivery services, typically with higher environmental costs.
- **Hypothesis H3** suggests that individuals with higher environmental sensitivity (NEPS score) are less willing to pay for express delivery, due to its greater ecological impact.

Likert analysis

Variables	Mean	Std Dev
NEPS	3.85	0,50
Agreement that ENV-friendly delivery should be default (5-point Likert)	4.28	1.03
Willingness to WAIT (WTW) for my delivery if more ENV-friendly (5-point Likert)	3.77	1.24
Willingness to PAY (WTP) for my delivery if more ENV-friendly (5-point Likert)	2.50	1.26
Willingness to PAY (WTP) for my delivery if delivery within 24 hours (5-point Likert)	2.81	1.42

Main results

PCA

Through the PCA Analysis, we identified four main dimensions: :

- human optimism and nature's resilience (RC1)
- negative impact and underestimation of environmental crises (RC2)
- natural limits and the fragility of the earth (RC3),
- tension between human dominion and respect for nature (RC4).

Linear regressions

- NEPS is positively and highly significant for Willingness to Wait (H1) and Willingness to Pay for Eco delivery (H2). So, individuals with higher environmental sensitivity are more nclined to wait longer and pay more for eco-friendly shipping.
- NEPS is only negatively and weakly significant for Willingness to Pay for Express delivery (H3).