

Bridging the Circular Economy Gap: A Taiwan-Centric Structural Model of Green Label Trust and Consumer Decision Pathways

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Abstract

As global supply chains adapt to strict decarbonization mandates (e.g., EU-CBAM, Europe- Carbon Border Adjustment Mechanism), high-tech export economies face critical market adoption barriers despite technological readiness. This paper establishes a novel Taiwan-centric structural framework to decode consumer green label trust and purchasing decision pathways within circular economy models. Drawing from the Taiwan-UK University Consortium (TUKUC) empirical foundation, we incorporate extended literature synthesis—integrating the Theory of Planned Behavior (TPB), Value-Belief-Norm (VBN) Theory, Signaling Theory, and Information Asymmetry—to detail the causal interdependencies across twelve factors within four core dimensions (Market Economics, Psychological Perception, Technical Functionality, and Social Policy). This study applies the Decision Making Trial and Evaluation Laboratory (DEMATEL) method to systematically analyze the Network Relationship Map (NRM) among 12 critical factors affecting consumer trust in green labels and their purchase intentions. These factors are categorized into four primary dimensions: Market & Economic (D_1), Psychological & Cognitive (D_2), Technical & Functional (D_3), and Social & Policy (D_4). The empirical findings reveal that Greenwashing Concerns (C_6) and Information Transparency (C_{12}) serve as the most fundamental cause factors driving the system. Conversely, Trust in Green Labels (C_4) and Perceived Price Premium (C_1) act as the primary effect factors. Detailed computational datasets, causal dynamics, conclusions, and actionable strategic recommendations are as provided.

Keywords

Taiwan Perspective, Circular Economy, Green Label Trust, Consumer Decision, DEMATEL.