Supplementary Information

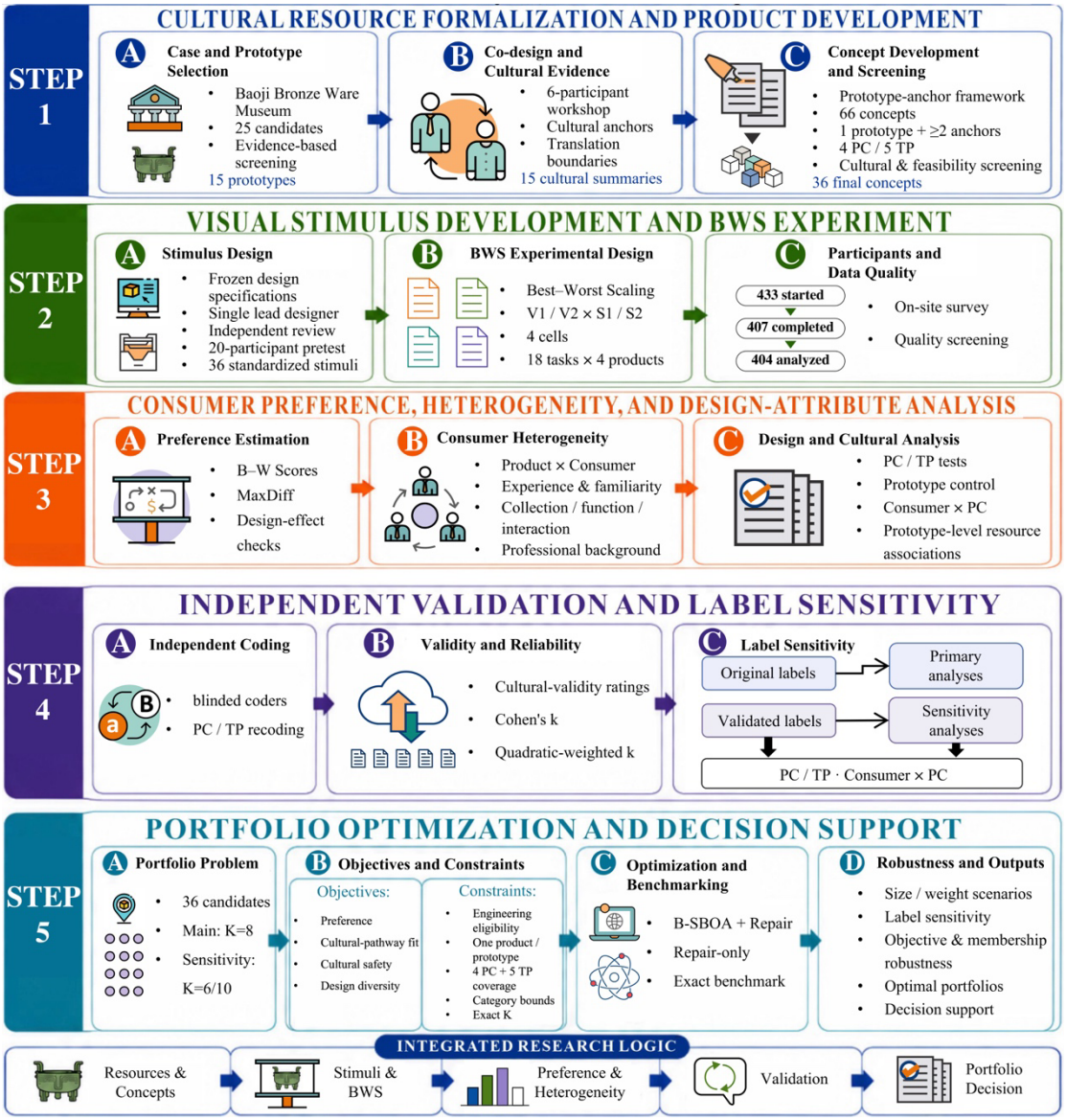
# Consumer Preferences for Museum Cultural and Creative Products: Best–Worst Scaling, Preference Heterogeneity, and Portfolio Decision Support

Bin Zhang [1], Ping Ji [1,*], Qi Jia [1], and Yefan Guo[1]

1 College of Art and Design, Shaanxi University of Science and Technology, Xi'an 710021, China

* Correspondence: jiping@sust.edu.cn;

Supplementary Figure S1. Overall research framework and analytical workflow of the study.




Supplementary Table S1. Global likelihood-ratio tests of experimental-design effects on product utilities.

| Effect | $\chi^2$ | df | $p$ |
|---|---|---|---|
| Product × Sequence | 123.217 | 70 | <0.001 |

| | | | |
|---|---|---|---|
| Product × Version | 168.679 | 70 | <0.001 |
| Product × Version × Sequence | 84.655 | 35 | <0.001 |

Note. Global experimental-design effects were evaluated using likelihood-ratio tests between nested conditional-logit specifications. Because Version and Sequence were constant within each choice task, their standalone main effects were not separately identified; inference concerned their interactions with product utility. Product-level simple effects were evaluated separately using respondent-clustered robust Wald tests with Benjamini–Hochberg false discovery rate correction.

Supplementary Table S2. Global Tests of Consumer Heterogeneity across Product Concept Strategies.

| Consumer characteristic | $N$ | Robust Wald $\chi^2(3)$ | BH-FDR $q$ |
|---|---|---|---|
| Museum cultural-product purchase experience | 404 | 18.813 | 0.0018 |
| Familiarity with Chinese bronze culture | 404 | 1.170 | 0.7602 |
| Collection orientation | 404 | 11.994 | 0.0148 |
| Importance of practical functionality | 404 | 12.649 | 0.0148 |
| Importance of interactive experience | 404 | 4.453 | 0.2598 |
| Relevant professional background | 391 | 8.621 | 0.0522 |

Note. Global Consumer × PC effects were evaluated using respondent-clustered robust Wald tests with three degrees of freedom. The six tests constituted one predefined testing family and were adjusted using the Benjamini–Hochberg false discovery rate procedure. PC-specific slopes were centered to sum to zero within each consumer characteristic. Continuous-variable effects correspond to a one-standard-deviation increase in the respective consumer characteristic; professional-background effects compare participants with and without a relevant professional background.