

## Supplementary Material S2

Statistical verification and sensitivity analyses for manuscript sustainability-4566106.

This supplement reports the verified model fit, explained variance, and indirect estimates for the main, strict-sample, and direct-experience analyses. Tables S1–S3 present the estimates used in the revised manuscript; Table S4 records the updates to the submitted direct-experience path coefficients. Tables S5–S7 add the latent-factor validity matrix, targeted item-content sensitivity results, and collection-stage sample formation. Tables S8–S10 add the common-response sensitivity analyses.

### Model specification and reproducibility

The main, strict-sample, and direct-experience latent models use the same 22 indicators and paths:  $EVP \rightarrow CESP$ ;  $CESP$  and  $EVP \rightarrow PA$ ;  $PA$ ,  $CESP$  and  $EVP \rightarrow SCS$ . First indicator loadings identify the latent scales. Full-information maximum likelihood is implemented using Stata method(mlmv); all core items are complete. Re-estimation used the archived analysis dataset in Stata 18 with version 17 syntax. File S2 supplies the code, logs, and summaries; Dataset S1 supplies the retained analysis variables.

Collection mode is retained only as aggregate recruitment information: 70 field and 430 online responses. A reliable record-level linkage could not be recovered after questionnaires from the two modes became mixed. The earlier mode-specific comparison has therefore been removed, and Dataset S1 excludes the unreliable collection\_mode field. The models below use the pooled data or questionnaire-defined subsets; direct experience is identified by visit\_exp = 1.

Table S1. Verified model fit.

| Sample            | n   | $\chi^2$ | df  | RMSEA | CFI   | TLI   | SRMR  |
|-------------------|-----|----------|-----|-------|-------|-------|-------|
| Main              | 500 | 235.739  | 203 | 0.018 | 0.994 | 0.994 | 0.027 |
| Strict            | 468 | 234.809  | 203 | 0.018 | 0.993 | 0.993 | 0.031 |
| Direct experience | 390 | 252.287  | 203 | 0.025 | 0.989 | 0.987 | 0.033 |

Table S2. In-sample explained variance of latent endogenous variables.

| Sample            | CESP R <sup>2</sup> | PA R <sup>2</sup> | SCS R <sup>2</sup> |
|-------------------|---------------------|-------------------|--------------------|
| Main              | 0.334835            | 0.379626          | 0.553182           |
| Strict            | 0.278638            | 0.310048          | 0.493309           |
| Direct experience | 0.329107            | 0.331097          | 0.555551           |

### Indirect associations and bootstrap intervals

Each model was refitted in 1,000 respondent-level resamples using seed 20260629. The indirect products were calculated in each replication; all 1,000 retained replicates per sample were complete. Standard errors are the standard deviations of the bootstrap replicates and intervals are their 2.5th and 97.5th percentiles using the Stata percentile convention. This procedure replaces the original normal-approximation intervals based on a delta

method applied to a bootstrap coefficient covariance matrix. Indirect estimates are unstandardized and should not be compared numerically with products of the rounded standardized paths. The auxiliary composite-score analysis retains its separate 5,000-replication setting. In the main model, the unstandardized serial coefficients are 0.529250, 0.425547, and 0.480843; their product is 0.108296. The product of the rounded standardized paths is approximately 0.124 and is on a different scale.

Table S3. Verified indirect estimates.

| Sample            | Component      | Estimate | Bootstrap SE | 95% percentile CI |
|-------------------|----------------|----------|--------------|-------------------|
| Main              | Through CESP   | 0.126130 | 0.033016     | [0.068, 0.195]    |
| Main              | Through PA     | 0.090077 | 0.026497     | [0.043, 0.148]    |
| Main              | Serial         | 0.108296 | 0.021986     | [0.071, 0.157]    |
| Main              | Total indirect | 0.324503 | 0.046825     | [0.237, 0.426]    |
| Strict            | Through CESP   | 0.105591 | 0.029346     | [0.052, 0.168]    |
| Strict            | Through PA     | 0.079665 | 0.025217     | [0.035, 0.135]    |
| Strict            | Serial         | 0.085227 | 0.017939     | [0.054, 0.128]    |
| Strict            | Total indirect | 0.270483 | 0.042265     | [0.191, 0.358]    |
| Direct experience | Through CESP   | 0.125895 | 0.037967     | [0.053, 0.205]    |
| Direct experience | Through PA     | 0.073205 | 0.031186     | [0.019, 0.141]    |
| Direct experience | Serial         | 0.120156 | 0.027457     | [0.077, 0.183]    |
| Direct experience | Total indirect | 0.319256 | 0.051232     | [0.229, 0.431]    |

### Corrections to the submitted subgroup results

Table S4. Submitted and corrected standardized direct-experience paths.

| Path                   | Submitted $\beta$ | Corrected $\beta$ | Submitted p | Corrected p |
|------------------------|-------------------|-------------------|-------------|-------------|
| EVP $\rightarrow$ CESP | 0.565             | 0.574             | <0.001      | <0.001      |
| CESP $\rightarrow$ PA  | 0.447             | 0.466             | <0.001      | <0.001      |
| EVP $\rightarrow$ PA   | 0.215             | 0.163             | <0.001      | 0.010       |
| CESP $\rightarrow$ SCS | 0.242             | 0.242             | <0.001      | <0.001      |
| PA $\rightarrow$ SCS   | 0.457             | 0.495             | <0.001      | <0.001      |
| EVP $\rightarrow$ SCS  | 0.148             | 0.139             | 0.003       | 0.012       |

The updated unstandardized serial indirect estimate for the direct-experience subgroup is 0.120156, with 95% percentile CI [0.077, 0.183], replacing the submitted estimate of 0.106. All six subgroup paths are positive and statistically significant; the EVP  $\rightarrow$  PA and EVP  $\rightarrow$  SCS  $p$  values are approximately 0.010 and 0.012, respectively.

### Latent-factor discriminant validity

The four-factor CFA was re-estimated on the same 500 records and all 22 core indicators. Table S5 uses estimated latent factor correlations, obtained from the standardized CFA covariance matrix, rather than Pearson correlations of composite scores. AVE was calculated as the mean squared standardized loading within each factor. Each square root of AVE exceeds all off-diagonal correlations involving that factor. The corresponding pairwise correlations and HTMT ratios are reported in main-text Table 4.

Table S5. Fornell–Larcker matrix:  $\sqrt{\text{AVE}}$  on the diagonal and latent factor correlations off the diagonal.

| Construct | EVP   | CESP  | PA    | SCS   |
|-----------|-------|-------|-------|-------|
| EVP       | 0.769 | 0.579 | 0.488 | 0.525 |
| CESP      | 0.579 | 0.756 | 0.589 | 0.612 |
| PA        | 0.488 | 0.589 | 0.770 | 0.687 |
| SCS       | 0.525 | 0.612 | 0.687 | 0.742 |

### Targeted item-content sensitivity

This post hoc check addresses the overlap identified in CESP6 (cultural distinctiveness), PA5 (personal distinctiveness/memorability), and PA4 (anticipated regret at loss). All three items were omitted together, leaving five EVP, five CESP, three PA, and six SCS indicators. The same 500 records, marker-variable identification, estimation method, and structural paths were retained. The primary 22-item model was not replaced, and the reduced specification is not presented as a separately validated scale.

Table S6. Primary and reduced-item standardized structural paths.

| Path                   | Primary (22 items) $\beta$ | Reduced (19 items) $\beta$ | Reduced p |
|------------------------|----------------------------|----------------------------|-----------|
| EVP $\rightarrow$ CESP | 0.579                      | 0.578                      | <0.001    |
| CESP $\rightarrow$ PA  | 0.461                      | 0.502                      | <0.001    |
| EVP $\rightarrow$ PA   | 0.222                      | 0.216                      | <0.001    |
| CESP $\rightarrow$ SCS | 0.250                      | 0.231                      | <0.001    |
| PA $\rightarrow$ SCS   | 0.465                      | 0.475                      | <0.001    |
| EVP $\rightarrow$ SCS  | 0.153                      | 0.151                      | 0.003     |

Reduced-model fit:  $\chi^2(146) = 177.548$ ,  $p = 0.039$ , RMSEA = 0.021, CFI = 0.993, TLI = 0.992, and SRMR = 0.027. In-sample latent  $R^2$  values are 0.334 for CESP, 0.424 for PA, and 0.552 for SCS. This check concerns the persistence of the direct-path pattern; no additional indirect bootstrap analysis was performed for the reduced model. File S2 provides the verification code, full output, and machine-readable summary.

### Collection-stage sample formation

Table S7. Recruitment and screening counts by collection mode.

| Mode     | Distributed | Returned / received | Not returned | Excluded | Retained |
|----------|-------------|---------------------|--------------|----------|----------|
| Field    | 92          | 77                  | 15           | 7        | 70       |
| Online   | —           | 430                 | —            | 0        | 430      |
| Combined | —           | 507                 | —            | 7        | 500      |

Field recruitment took place at Xiantong Temple, Tayuan Temple, and Longquan Temple in Shanxi. Fifteen questionnaires were not recovered because volunteers could not be contacted; seven returned questionnaires were excluded for low response quality. All 430 received online questionnaires passed the attention check and were retained. The 500 retained questionnaires were merged and exported after screening. Online invitations were public-platform calls, so a denominator equivalent to distributed field questionnaires is not specified (— means not applicable, not zero). These are aggregate recruitment counts, not recoverable respondent-level mode labels. The later exclusion of 32 patterned records created the strict sensitivity sample of 468 and is separate from this flow.

## **Common-response sensitivity analysis**

### **Purpose and specification**

This post hoc analysis evaluates sensitivity to an assumed uniform response component rather than estimating the amount of common method bias. Each of the 22 items was standardized within the analyzed sample to zero mean and unit observed variance using the maximum-likelihood variance convention. A common-response factor (RI) loaded on every item with the loading fixed to 1. RI was orthogonal to EVP and to the disturbances of CESP, PA, and SCS, and hence to all four substantive factors. The original six structural paths and the four substantive measurement factors were retained. The model is  $z_{ij} = v_j + \lambda_j \eta_{ik} + RI_i + \varepsilon_{ij}$ , with  $\text{Var}(RI)$  fixed to the sensitivity setting. This is a constrained adaptation of the random-intercept item factor formulation described by Maydeu-Olivares and Coffman (2006; doi:10.1037/1082-989X.11.4.344).

RI variance was fixed to 0.05, 0.10, 0.20, and 0.30, allocating an assumed common component equal to 5%, 10%, 20%, or 30% of each item's observed standardized variance. The 0% row is the original four-factor model on standardized items. The scenarios span increasing strengths and are not empirically estimated contamination rates or recommended cut-offs. Freely estimated RI-variance fits were also attempted but did not yield converged solutions; they are not interpreted. The fixed-strength grid makes the assumptions explicit rather than treating an unstable free-factor fit as a bias estimate. The complete attempts and grid outputs are archived in File S2. Procedures and the distinction between method assessment and complete bias removal follow the cautions discussed by Podsakoff et al. (2012; doi:10.1146/annurev-psych-120710-100452).

### **Estimation and checks**

Models were fitted by full-information maximum likelihood in Stata 18 using version 17 syntax, separately for the pooled 500 and strict 468 records. The strict sample excludes a modal answer frequency of at least 18 of 22 core items. All models through the 20% setting converged with positive estimated variances; the pooled 30% model also converged and had positive variances. The strict 30% model failed the convergence check and is labelled NC; its coefficients and fit statistics are not interpreted. Standardized structural coefficients and conditional Wald p-values are reported. The common-component strength is treated as fixed within each scenario; p-values do not account for uncertainty about that assumed strength. No bootstrap indirect intervals were estimated for this grid. Latent scales are internally identified by Stata; only standardized structural coefficients are compared across scenarios.

Table S8. Standardized paths under assumed common-response components: pooled sample (n = 500).

| Path       | 0%                    | 5%                    | 10%                   | 20%                   | 30%               |
|------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------|
| EVP → CESP | 0.579<br>( $<0.001$ ) | 0.539<br>( $<0.001$ ) | 0.491<br>( $<0.001$ ) | 0.353<br>( $<0.001$ ) | 0.078<br>(0.518)  |
| CESP → PA  | 0.461<br>( $<0.001$ ) | 0.440<br>( $<0.001$ ) | 0.415<br>( $<0.001$ ) | 0.330<br>( $<0.001$ ) | 0.100<br>(0.408)  |
| EVP → PA   | 0.222<br>( $<0.001$ ) | 0.204<br>( $<0.001$ ) | 0.181<br>(0.002)      | 0.106<br>(0.106)      | -0.091<br>(0.421) |
| CESP → SCS | 0.250<br>( $<0.001$ ) | 0.243<br>( $<0.001$ ) | 0.234<br>( $<0.001$ ) | 0.201<br>(0.001)      | 0.076<br>(0.437)  |
| PA → SCS   | 0.465<br>( $<0.001$ ) | 0.459<br>( $<0.001$ ) | 0.451<br>( $<0.001$ ) | 0.420<br>( $<0.001$ ) | 0.297<br>(0.002)  |
| EVP → SCS  | 0.153<br>(0.002)      | 0.146<br>(0.004)      | 0.136<br>(0.009)      | 0.099<br>(0.086)      | -0.034<br>(0.741) |

Note. Cells report standardized  $\beta$  with conditional p in parentheses. Percentages are imposed shares of observed item variance, not measured amounts of method bias. NC denotes a non-converged solution and is not interpreted.

Table S9. Standardized paths under assumed common-response components: strict sample (n = 468).

| Path       | 0%                    | 5%                    | 10%                   | 20%                   | 30% |
|------------|-----------------------|-----------------------|-----------------------|-----------------------|-----|
| EVP → CESP | 0.528<br>( $<0.001$ ) | 0.482<br>( $<0.001$ ) | 0.425<br>( $<0.001$ ) | 0.253<br>(0.001)      | NC  |
| CESP → PA  | 0.419<br>( $<0.001$ ) | 0.393<br>( $<0.001$ ) | 0.358<br>( $<0.001$ ) | 0.236<br>(0.002)      | NC  |
| EVP → PA   | 0.207<br>( $<0.001$ ) | 0.184<br>(0.001)      | 0.154<br>(0.011)      | 0.050<br>(0.497)      | NC  |
| CESP → SCS | 0.236<br>( $<0.001$ ) | 0.227<br>( $<0.001$ ) | 0.214<br>( $<0.001$ ) | 0.160<br>(0.016)      | NC  |
| PA → SCS   | 0.454<br>( $<0.001$ ) | 0.446<br>( $<0.001$ ) | 0.433<br>( $<0.001$ ) | 0.382<br>( $<0.001$ ) | NC  |
| EVP → SCS  | 0.150<br>(0.004)      | 0.140<br>(0.008)      | 0.127<br>(0.021)      | 0.071<br>(0.273)      | NC  |

Note. Cells report standardized  $\beta$  with conditional p in parentheses. Percentages are imposed shares of observed item variance, not measured amounts of method bias. NC denotes a non-converged solution and is not interpreted.

Table S10. Fit and convergence of the common-response sensitivity models.

| Sample / share | $\chi^2$ | df  | RMSEA | CFI   | TLI   | SRMR  | Converged |
|----------------|----------|-----|-------|-------|-------|-------|-----------|
| Pooled 0%      | 235.739  | 203 | 0.018 | 0.994 | 0.994 | 0.027 | Yes       |
| Pooled 5%      | 235.779  | 203 | 0.018 | 0.994 | 0.994 | 0.028 | Yes       |
| Pooled 10%     | 235.722  | 203 | 0.018 | 0.994 | 0.994 | 0.029 | Yes       |
| Pooled 20%     | 234.877  | 203 | 0.018 | 0.995 | 0.994 | 0.030 | Yes       |
| Pooled 30%     | 231.290  | 203 | 0.017 | 0.995 | 0.994 | 0.035 | Yes       |
| Strict 0%      | 234.809  | 203 | 0.018 | 0.993 | 0.993 | 0.031 | Yes       |
| Strict 5%      | 235.131  | 203 | 0.018 | 0.993 | 0.992 | 0.032 | Yes       |
| Strict 10%     | 235.332  | 203 | 0.018 | 0.993 | 0.992 | 0.032 | Yes       |
| Strict 20%     | 234.543  | 203 | 0.018 | 0.994 | 0.993 | 0.035 | Yes       |
| Strict 30%     | —        | —   | —     | —     | —     | —     | No        |

### Interpretation

All six direct paths remain positive and statistically significant at the 5% and 10% settings in both samples. At 20%, the focal  $EVP \rightarrow CESP$ ,  $CESP \rightarrow PA$ , and  $PA \rightarrow SCS$  links remain positive and significant, as does  $CESP \rightarrow SCS$ ; the smaller  $EVP \rightarrow PA$  and  $EVP \rightarrow SCS$  paths are not significant. At 30%, the converged pooled model retains a significant  $PA \rightarrow SCS$  association but not the other five paths. The strict 30% result is uninterpretable because of non-convergence. Thus, the focal sequence is not equally robust to all assumed common components. Good fit across converged scenarios cannot identify which component strength is correct. The grid evaluates one equal-loading, orthogonal response pattern; it does not eliminate social desirability, other shared-method structures, reverse ordering, or volunteer selection. Its purpose is to expose the dependence of the path interpretation on explicit shared-response assumptions.