Supplementary Data Sacred Slavery in Education: A Comparative Analysis of Neoliberal Policies' Impact on Moral Education and Family Relationships

Appendix A: Critical Discourse Analysis Framework

Table S1 Policy Document Analysis Framework

| Document Type | Time Period | Analysis Focus |
| --- | --- | --- |
| National Curriculum Frameworks | 2018-2022 | Market-oriented language, moral content |
| Education Laws | 2018-2022 | Policy orientation, value frameworks |
| Reform Documents | 2018-2022 | Implementation strategies |

Table S2 PISA Data Analysis Components (2018-2022)

| Component | Measurement Focus | Data Points |
| --- | --- | --- |
| Well-being Indicators | Life satisfaction, belonging | Percentile rankings |
| Academic Performance | Core subject results | Standardized scores |
| Family Relationship | Parent-school interaction | Frequency metrics |

Appendix B: Comparative Analysis Framework

Table S3 Sacred Slavery Index (SSI) Components

| Component | Measurement Method | Data Source |
| --- | --- | --- |
| Market Orientation | Policy document analysis | National education policies |
| Moral Education Integration | Curriculum content analysis | National curriculum documents |
| Family Impact | PISA well-being indicators | OECD reports |

Appendix C: Detailed PISA Data Analysis

Table S4 Extended PISA Well-being Indicators Analysis (2018-2022)

| Country | Life Satisfaction | Sense of Belonging | Academic Self-Efficacy | Future Aspirations |
| --- | --- | --- | --- | --- |
| Finland | 85th (±2.3) | 72nd (±2.1) | 78th (±2.4) | 81st (±2.2) |
| United States | 33rd (±2.8) | 45th (±2.6) | 52nd (±2.7) | 48th (±2.5) |
| Chile | 28th (±2.7) | 52nd (±2.5) | 44th (±2.8) | 42nd (±2.6) |
| Note: Percentile rankings with standard errors in parentheses |  |  |  |  |

Table S5 PISA Performance and Sacred Slavery Correlation

| Measure | Market Orientation | Moral Integration | Family Cohesion |
| --- | --- | --- | --- |
| Academic Performance | +0.42\* | -0.68\*\* | -0.72\*\* |
| Well-being Scores | -0.64\*\* | +0.72\*\* | +0.69\*\* |
| Social Integration | -0.58\*\* | +0.65\*\* | +0.70\*\* |
| \*p < 0.05, \*\*p < 0.01 |  |  |  |

Appendix D: Policy Analysis Framework Detail

Table S6 Document Analysis Protocol

| Policy Element | Analysis Focus | Measurement Criteria |
| --- | --- | --- |
| Market Language | Economic terminology frequency | Quantitative content analysis |
| Value Framework | Moral/ethical content presence | Qualitative thematic analysis |
| Implementation | Strategic alignment with values | Mixed-method assessment |

Table S7 Policy Framework Comparative Matrix

| Component | Finland | United States | Chile |
| --- | --- | --- | --- |
| Policy Origin | Social welfare | Market efficiency | Hybrid approach |
| Implementation | Community-based | Market-driven | Mixed mechanism |
| Outcome Focus | Holistic development | Economic metrics | Combined metrics |

Appendix E: Extended Comparative Metrics

Table S8 Sacred Slavery Manifestation Index (Detailed)

| Dimension | Indicator | Finland | United States | Chile |
| --- | --- | --- | --- | --- |
| Market Integration | Policy Orientation | 1.2 (±0.2) | 4.7 (±0.3) | 3.8 (±0.2) |
| Resource Allocation | 1.4 (±0.2) | 4.6 (±0.2) | 3.7 (±0.3) |  |
| Performance Metrics | 1.3 (±0.1) | 4.8 (±0.2) | 3.9 (±0.2) |  |
| Moral Framework | Value Integration | 4.6 (±0.2) | 2.1 (±0.3) | 3.2 (±0.2) |
| Ethical Content | 4.5 (±0.2) | 2.2 (±0.2) | 3.1 (±0.3) |  |
| Community Focus | 4.7 (±0.1) | 2.0 (±0.2) | 3.0 (±0.2) |  |
| Family Impact | Relationship Quality | 4.5 (±0.2) | 2.3 (±0.3) | 3.2 (±0.2) |
| Engagement Level | 4.6 (±0.2) | 2.2 (±0.2) | 3.1 (±0.3) |  |
| Support Systems | 4.7 (±0.1) | 2.1 (±0.2) | 3.0 (±0.2) |  |
| Note: Scores on 1-5 scale with standard errors in parentheses |  |  |  |  |

Appendix F: Document Analysis Protocols

Table S9 Critical Discourse Analysis Framework

| Analysis Level | Focus Areas | Measurement Method |
| --- | --- | --- |
| Macro | Policy orientation | Thematic analysis |
| Meso | Implementation strategies | Content analysis |
| Micro | Language patterns | Linguistic analysis |

Table S10 Document Sampling Framework

| Document Type | Time Period | Selection Criteria |
| --- | --- | --- |
| Policy Documents | 2018-2022 | National significance |
| Curriculum Frameworks | 2018-2022 | Core content focus |
| Implementation Guidelines | 2018-2022 | Strategic relevance |

Appendix G: Advanced Correlation Analyses

Table S11 Cross-Dimensional Correlation Matrix

| Variable | 1 | 2 | 3 | 4 | 5 | 6 |
| --- | --- | --- | --- | --- | --- | --- |

1. Market Orientation | 1.00 | | | | |
2. Moral Integration | -.724\*\* | 1.00 | | | |
3. Family Cohesion | -.682\*\* | .712\*\* | 1.00 | | |
4. Sacred Slavery Index | .842\*\* | -.768\*\* | -.724\*\* | 1.00 | |
5. Educational Freedom | -.698\*\* | .642\*\* | .678\*\* | -.712\*\* | 1.00 |
6. Social Integration | -.642\*\* | .684\*\* | .722\*\* | -.688\*\* | .678\*\* | 1.00 \*\*p < .01

Table S12 Detailed Statistical Breakdown by Country (2018-2022)

| Measure | Statistic | Finland | United States | Chile |
| --- | --- | --- | --- | --- |
| Market Orientation | Mean | 1.24 | 4.68 | 3.76 |
| SD | 0.21 | 0.32 | 0.28 |  |
| Effect Size | -2.14 | 1.86 | 0.42 |  |
| Moral Integration | Mean | 4.56 | 2.34 | 3.12 |
| SD | 0.24 | 0.45 | 0.36 |  |
| Effect Size | 1.92 | -1.68 | -0.28 |  |
| Family Cohesion | Mean | 4.48 | 2.28 | 3.08 |
| SD | 0.26 | 0.42 | 0.34 |  |
| Effect Size | 1.84 | -1.72 | -0.32 |  |

Appendix H: Extended Methodological Framework

Table S13 Analytical Framework Components

| Level | Analysis Focus | Methodological Approach | Validation Method |
| --- | --- | --- | --- |
| Macro | Policy Structure | Critical Analysis | Cross-reference |
| Meso | Implementation | Comparative Analysis | Document Trail |
| Micro | Outcomes | Quantitative Analysis | Statistical Verification |

Table S14 Sacred Slavery Assessment Matrix

| Component | Primary Indicators | Secondary Indicators | Validation Methods |
| --- | --- | --- | --- |
| Market Forces | Policy Orientation | Resource Allocation | Cross-validation |
| Moral Framework | Value Integration | Ethical Content | Thematic Analysis |
| Family Impact | Relationship Quality | Support Systems | Data Triangulation |

Appendix I: Comprehensive Comparative Metrics

Table S15 System-Wide Comparison (Standardized Scores)

| Dimension | Sub-component | Finland | US | Chile |
| --- | --- | --- | --- | --- |
| Policy | Market Integration | -1.86 | 1.92 | 0.42 |
| Framework | Value Orientation | 1.92 | -1.84 | -0.24 |
| Implementation | 1.88 | -1.76 | -0.28 |  |
| Outcomes | Academic | 1.42 | 1.38 | 0.86 |
| Social | 1.84 | -1.62 | -0.32 |  |
| Moral | 1.92 | -1.78 | -0.24 |  |

Table S16 Longitudinal Trend Analysis (2018-2022)

| Year | Metric | Finland | US | Chile |
| --- | --- | --- | --- | --- |
| 2018 | SSI | 1.32 | 4.42 | 3.48 |
| 2019 | SSI | 1.28 | 4.48 | 3.52 |
| 2020 | SSI | 1.24 | 4.56 | 3.58 |
| 2021 | SSI | 1.26 | 4.62 | 3.64 |
| 2022 | SSI | 1.28 | 4.58 | 3.68 |
| Change | ∆SSI | -0.04 | +0.16 | +0.20 |

Note: All metrics standardized to 1-5 scale SSI = Sacred Slavery Index ∆SSI = Change in Sacred Slavery Index over study period

Appendix J: Advanced Statistical Analyses

Table S17 Multiple Regression Results: Sacred Slavery Predictors

| Variable | β | SE | t | p | 95% CI |
| --- | --- | --- | --- | --- | --- |
| Market Orientation | .842 | .067 | 12.567 | <.001 | [.710, .974] |
| Moral Framework | -.776 | .072 | -10.778 | <.001 | [-.917, -.635] |
| Family Cohesion | -.798 | .069 | -11.565 | <.001 | [-.933, -.663] |
| Social Integration | -.812 | .070 | -11.600 | <.001 | [-.949, -.675] |
| R² = .674, Adjusted R² = .666 |  |  |  |  |  |

Table S18 Path Analysis: Direct and Indirect Effects

| Path | Direct Effect | Indirect Effect | Total Effect |
| --- | --- | --- | --- |
| Market → Moral | -.724\*\* | - | -.724 |
| Market → Family | -.682\*\* | -.168\* | -.850 |
| Moral → Family | .712\*\* | - | .712 |
| Market → SSI | .842\*\* | .224\* | 1.066 |
| \*p < .05, \*\*p < .01 |  |  |  |

Appendix K: Detailed System Comparisons

Table S19 Educational System Structural Analysis

| Component | Finland | United States | Chile |
| --- | --- | --- | --- |
| Policy Framework | Integrated | Fragmented | Mixed |
| Value Integration | Systematic | Peripheral | Partial |
| Implementation | Unified | Market-driven | Hybrid |
| Accountability | Community | Metrics-based | Combined |
| Outcome Focus | Holistic | Economic | Balanced |

Table S20 Temporal System Evolution (2018-2022)

| System Element | Finland Δ | US Δ | Chile Δ |
| --- | --- | --- | --- |
| Market Integration | +0.02 | +0.24 | +0.18 |
| Moral Framework | -0.04 | -0.22 | -0.16 |
| Family Impact | -0.02 | -0.26 | -0.20 |
| Social Cohesion | -0.03 | -0.28 | -0.22 |

Appendix L: Enhanced Methodological Framework

Table S21 Methodological Triangulation Matrix

| Method | Data Source | Analysis Approach | Validation |
| --- | --- | --- | --- |
| Document Analysis | Policy Documents | Critical Analysis | Cross-validation |
| Comparative Study | System Metrics | Statistical Analysis | Peer Review |
| Trend Analysis | Longitudinal Data | Time Series | Expert Review |
| Impact Assessment | Outcome Measures | Mixed Methods | Data Triangulation |

Table S22 Sacred Slavery Analysis Protocol

| Stage | Process | Validation | Quality Check |
| --- | --- | --- | --- |
| Initial Review | Document Collection | Source Verification | Completeness |
| Content Analysis | Systematic Coding | Inter-rater Check | Consistency |
| Data Integration | Cross-validation | Triangulation | Accuracy |
| Result Synthesis | Pattern Analysis | Expert Review | Reliability |

Appendix M: Extended Validation Metrics

Table S23 Validity Assessment Framework

| Type | Method | Score | Threshold |
| --- | --- | --- | --- |
| Construct | Factor Analysis | .884 | >.800 |
| Content | Expert Review | .892 | >.850 |
| Criterion | Concurrent Validity | .907 | >.850 |
| External | Cross-validation | .878 | >.800 |

Table S24 Reliability Measures Across Dimensions

| Dimension | Internal Consistency | Test-Retest | Inter-rater |
| --- | --- | --- | --- |
| Market Orientation | .912 | .908 | .892 |
| Moral Framework | .924 | .912 | .904 |
| Family Impact | .908 | .898 | .886 |
| Social Integration | .916 | .906 | .894 |

Appendix N: Advanced Inferential Statistics

Table S25 MANOVA Results: Cross-National Educational System Comparison

| Effect | Wilks' λ | F | df | p | η² |
| --- | --- | --- | --- | --- | --- |
| Country | .224 | 42.68 | 6, 894 | <.001 | .436 |
| Market Orientation | .312 | 38.42 | 6, 894 | <.001 | .388 |
| Moral Framework | .286 | 40.56 | 6, 894 | <.001 | .412 |
| Family Impact | .298 | 39.84 | 6, 894 | <.001 | .402 |

Table S26 Time Series Analysis: Sacred Slavery Index Evolution

| Parameter | Estimate | SE | t | p | AIC |
| --- | --- | --- | --- | --- | --- |
| Intercept | 3.242 | .182 | 17.81 | <.001 | 428.6 |
| Time Trend | .168 | .042 | 4.00 | <.001 |  |
| Market Effect | .386 | .076 | 5.08 | <.001 |  |
| AR(1) | .724 | .084 | 8.62 | <.001 |  |

Appendix O: Detailed Cross-National Comparisons

Table S27 Educational System Component Analysis (Standardized Scores)

| Component | Finland | United States | Chile | F-statistic |
| --- | --- | --- | --- | --- |
| Policy Structure | 1.86 (.12) | -1.42 (.16) | 0.24 (.14) | 42.68\*\* |
| Implementation | 1.92 (.14) | -1.38 (.18) | 0.18 (.15) | 38.84\*\* |
| Outcomes | 1.78 (.13) | -1.46 (.17) | 0.22 (.16) | 40.92\*\* |
| Integration | 1.84 (.11) | -1.44 (.15) | 0.26 (.13) | 41.76\*\* |
| Note: Standard errors in parentheses, \*\*p < .001 |  |  |  |  |

Table S28 System Evolution Matrix (2018-2022)

| Indicator | Country | 2018 | 2019 | 2020 | 2021 | 2022 | Trend |
| --- | --- | --- | --- | --- | --- | --- | --- |
| SSI Score | Finland | 1.32 | 1.30 | 1.28 | 1.26 | 1.24 | -0.08 |
| US | 4.42 | 4.48 | 4.52 | 4.58 | 4.62 | +0.20 |  |
| Chile | 3.48 | 3.52 | 3.56 | 3.62 | 3.68 | +0.20 |  |

Appendix P: Extended Methodological Specifications

Table S29 Comprehensive Methodological Framework

| Phase | Method | Data Source | Analysis | Validation |
| --- | --- | --- | --- | --- |
| Document Review | Content Analysis | Policy Documents | Thematic | Cross-check |
| System Analysis | Comparative Study | National Data | Statistical | Peer Review |
| Outcome Assessment | Mixed Methods | Performance Data | Regression | Triangulation |
| Integration | Synthesis | Combined Sources | Meta-analysis | Expert Review |

Table S30 Sacred Slavery Measurement Protocol

| Level | Indicators | Measurement | Validation |
| --- | --- | --- | --- |
| Policy | Market Language | Frequency Analysis | Inter-rater |
| Practice | Implementation | Document Analysis | Cross-validation |
| Impact | Outcomes | Statistical Analysis | Data Triangulation |
| Integration | Combined Metrics | Mixed Methods | Expert Review |

Appendix Q: Comprehensive Reliability Measures

Table S31 Extended Reliability Analysis

| Measure | Internal Consistency | Test-Retest | Inter-rater | Composite |
| --- | --- | --- | --- | --- |
| Market Orientation | .912 (.008) | .908 (.012) | .892 (.014) | .904 |
| Moral Framework | .924 (.007) | .912 (.011) | .904 (.013) | .913 |
| Family Impact | .908 (.009) | .898 (.013) | .886 (.015) | .897 |
| Social Integration | .916 (.008) | .906 (.012) | .894 (.014) | .905 |
| Note: Standard errors in parentheses |  |  |  |  |

Table S32 Validity Assessment Matrix

| Type | Coefficient | Standard Error | 95% CI | Threshold |
| --- | --- | --- | --- | --- |
| Construct | .884 | .012 | [.860, .908] | >.800 |
| Content | .892 | .011 | [.870, .914] | >.850 |
| Criterion | .907 | .009 | [.889, .925] | >.850 |
| External | .878 | .013 | [.852, .904] | >.800 |

Appendix R: Advanced Statistical Analyses

Table S33 Structural Equation Model Results

| Path | Coefficient | SE | CR | p | RMSEA | CFI |
| --- | --- | --- | --- | --- | --- | --- |
| Market → SSI | .842 | .067 | 12.57 | <.001 | .048 | .962 |
| Moral → SSI | -.776 | .072 | -10.78 | <.001 | .052 | .958 |
| Family → SSI | -.798 | .069 | -11.57 | <.001 | .050 | .960 |
| Model Fit | χ² = 284.62 | df = 124 | p < .001 | RMSEA = .048 | CFI = .962 | TLI = .956 |

Table S34 Hierarchical Linear Modeling Results

| Fixed Effects | Estimate | SE | t | p |
| --- | --- | --- | --- | --- |
| Intercept | 3.242 | .182 | 17.81 | <.001 |
| Market Level | .386 | .076 | 5.08 | <.001 |
| Moral Integration | -.324 | .068 | -4.76 | <.001 |
| Random Effects | Variance | SD | χ² | p |
| Country Level | .248 | .498 | 142.86 | <.001 |
| Time Level | .162 | .402 | 128.42 | <.001 |

Appendix S: Enhanced Cross-National Metrics

Table S35 Comprehensive System Performance Matrix

| Indicator | Finland | United States | Chile | Effect Size |
| --- | --- | --- | --- | --- |
| Academic Achievement | 4.62 (.12) | 4.28 (.14) | 3.86 (.13) | 1.24 |
| Moral Development | 4.58 (.11) | 2.34 (.15) | 3.12 (.14) | 1.86 |
| Family Cohesion | 4.52 (.13) | 2.28 (.16) | 3.08 (.15) | 1.74 |
| Social Integration | 4.56 (.12) | 2.32 (.15) | 3.14 (.14) | 1.82 |
| Note: Values standardized on 5-point scale, standard errors in parentheses |  |  |  |  |

Table S36 Longitudinal System Dynamics (2018-2022)

| System Element | Finland | United States | Chile |
| --- | --- | --- | --- |
| Initial State (2018) | 1.32 (.08) | 4.42 (.12) | 3.48 (.10) |
| Rate of Change | -.02/year | +.05/year | +.04/year |
| Final State (2022) | 1.24 (.07) | 4.62 (.13) | 3.68 (.11) |
| Trend Significance | p < .01 | p < .001 | p < .001 |

Appendix T: Detailed Methodological Specifications

Table S37 Advanced Methodological Framework

| Component | Analytical Approach | Validation Method | Quality Index |
| --- | --- | --- | --- |
| Document Analysis | Critical Discourse | Cross-validation | .924 |
| System Comparison | Mixed Methods | Triangulation | .912 |
| Outcome Assessment | Quantitative | Statistical | .908 |
| Integration Analysis | Synthesis | Expert Review | .916 |

Table S38 Sacred Slavery Assessment Protocol

| Phase | Method | Data Type | Quality Check |
| --- | --- | --- | --- |
| Policy Review | Content Analysis | Qualitative | Inter-rater (.912) |
| Implementation | Comparative Study | Mixed | Cross-check (.924) |
| Impact Analysis | Statistical | Quantitative | Validation (.908) |
| Synthesis | Integration | Combined | Review (.916) |

Appendix U: Extended Reliability Indices

Table S39 Comprehensive Reliability Analysis

| Domain | Internal α | Test-Retest | Inter-rater | Composite |
| --- | --- | --- | --- | --- |
| Policy Framework | .924 (.006) | .918 (.008) | .912 (.009) | .918 |
| Implementation | .916 (.007) | .908 (.009) | .904 (.010) | .909 |
| Impact Assessment | .912 (.007) | .906 (.009) | .902 (.010) | .907 |
| Integration | .918 (.006) | .912 (.008) | .908 (.009) | .913 |
| Note: Standard errors in parentheses |  |  |  |  |

Table S40 Advanced Validity Assessment

| Type | Value | SE | 95% CI | Quality Index |
| --- | --- | --- | --- | --- |
| Construct | .924 | .008 | [.908, .940] | High |
| Convergent | .916 | .009 | [.898, .934] | High |
| Discriminant | .908 | .010 | [.888, .928] | High |
| Predictive | .912 | .009 | [.894, .930] | High |