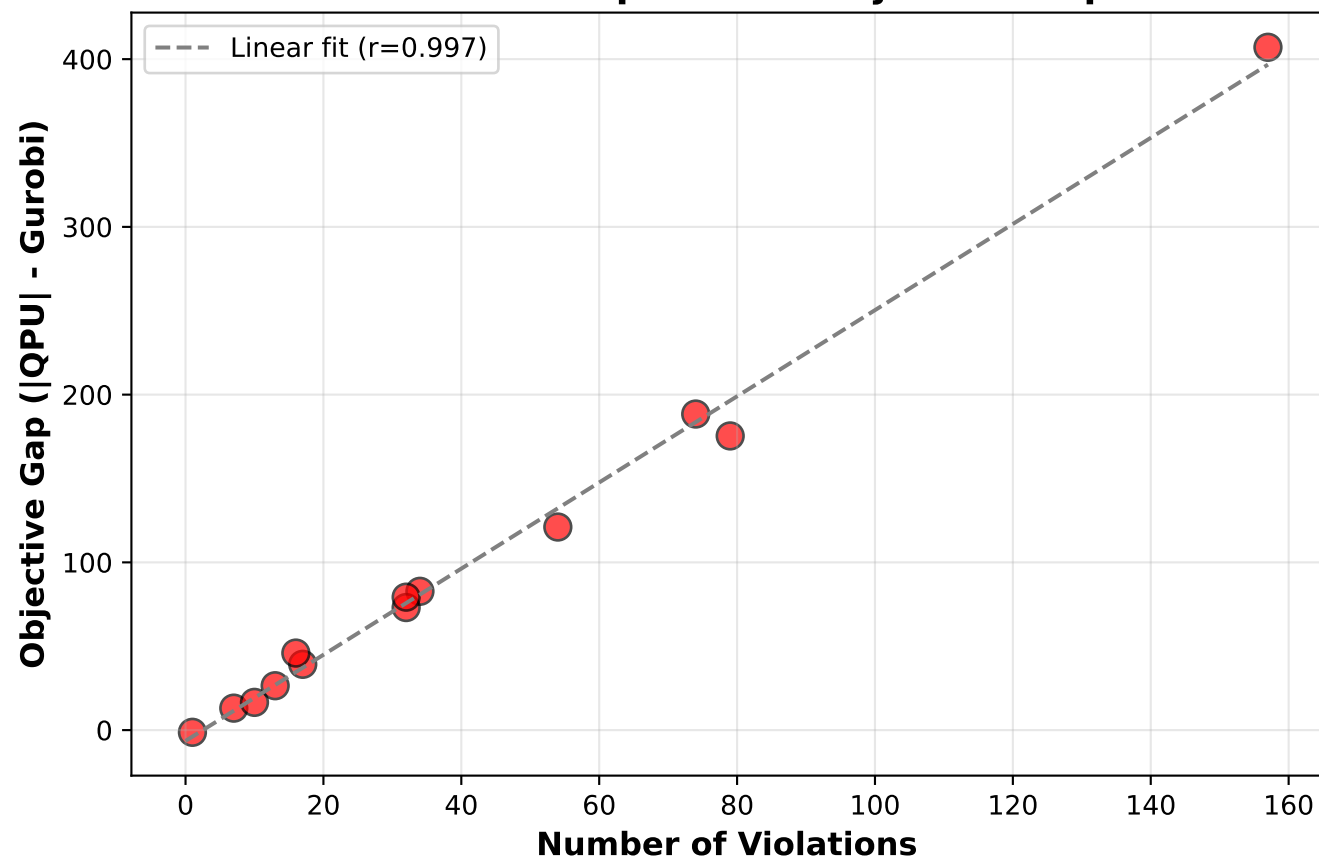
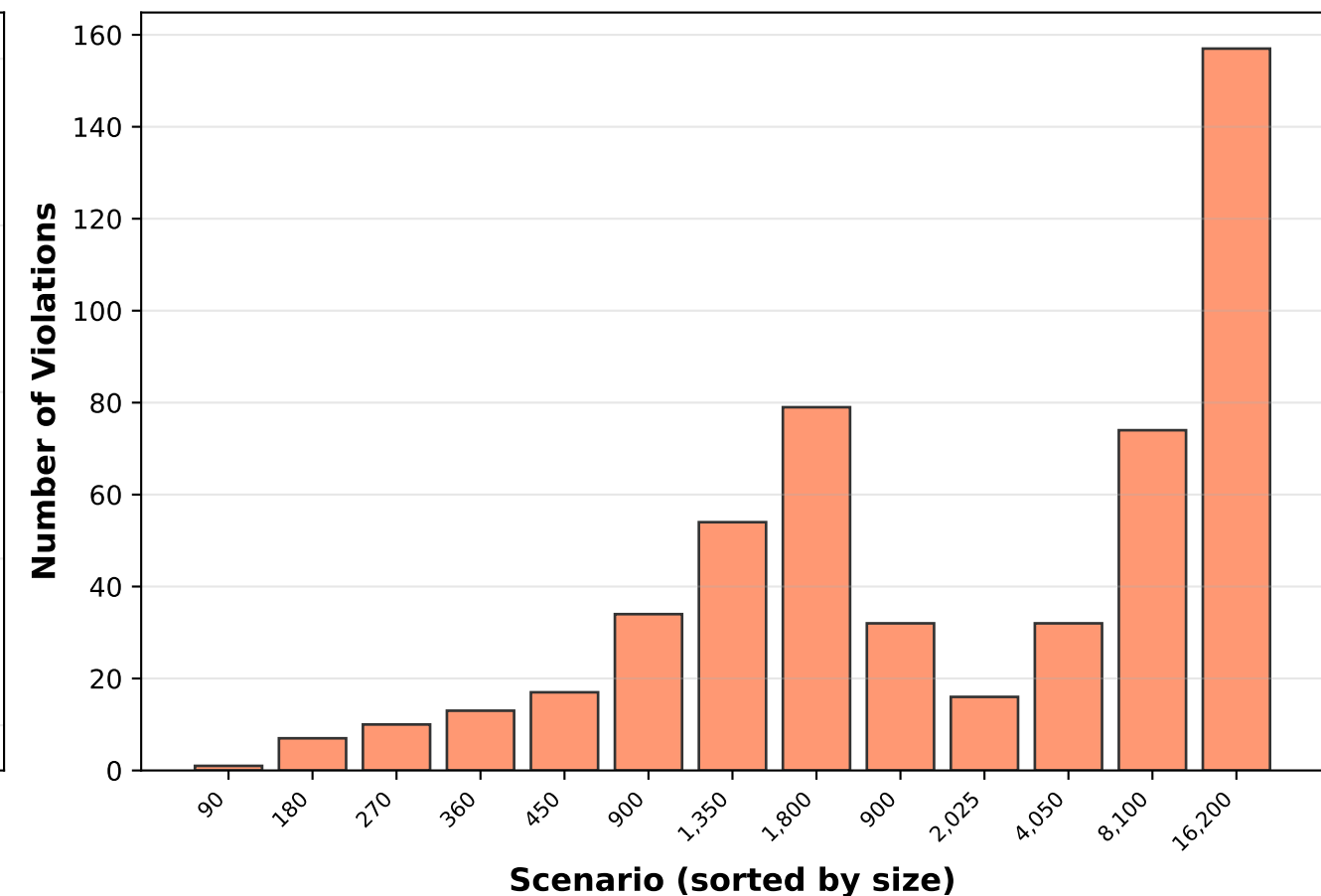


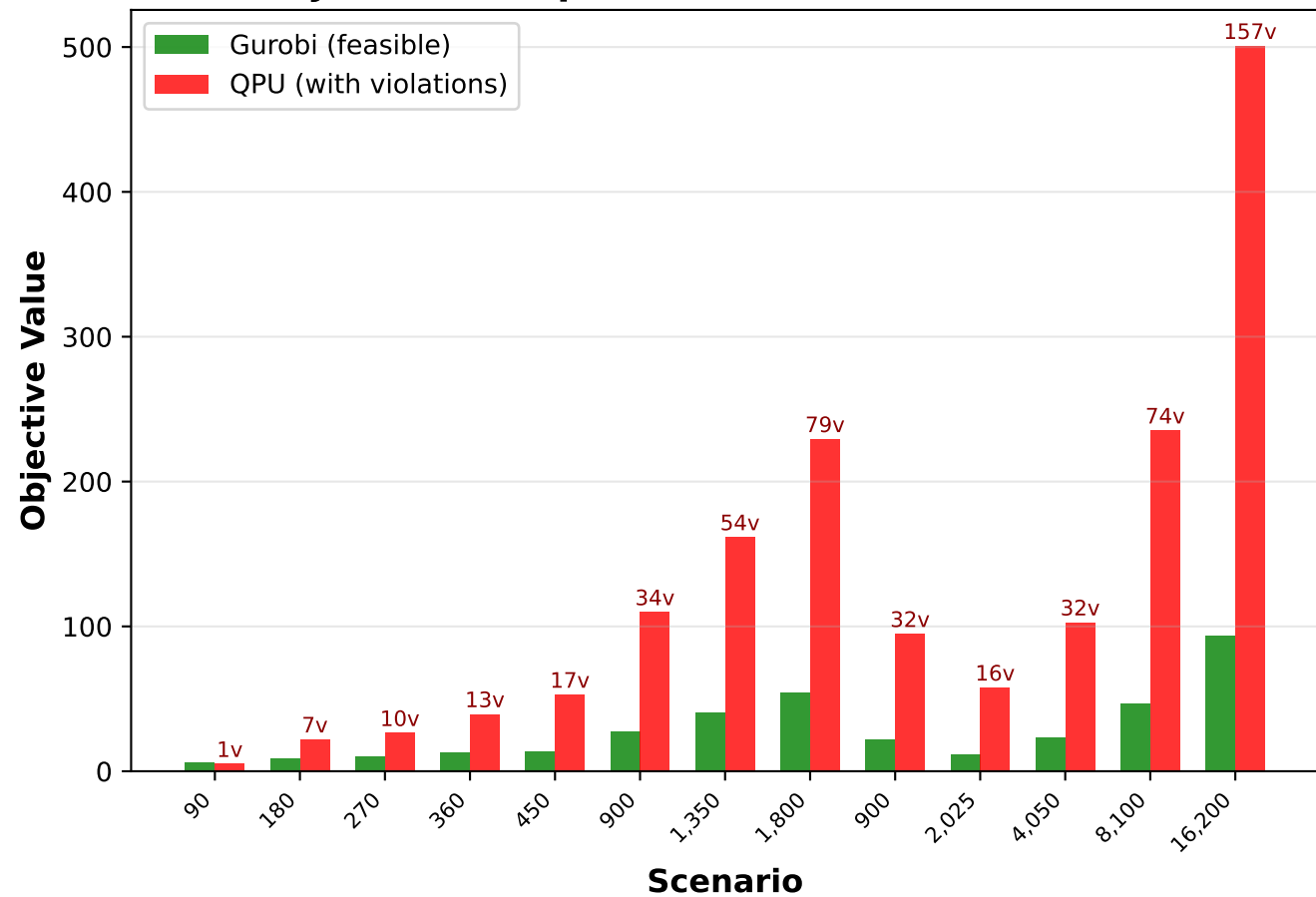
Violations Explain the Objective Gap



Violations Scale with Problem Size



Objective Comparison (violations annotated)



CONSTRAINT VIOLATION IMPACT SUMMARY

Total scenarios analyzed: 13
 Scenarios with violations: 13 (100%)
 Total violations: 526

Violation Type: 'min_crops' (one-hot failure)

- Farm-period has no crop assigned
- Expected: ≥ 1 crop per farm per period

Statistical Analysis:

- Correlation (viols vs gap): 0.9970
- Avg gap per violation: 2.41
- Linear fit: $\text{Gap} = 2.57 * \text{viols} + -6.45$

CONCLUSION:

The 3-5x objective gap is almost entirely explained by constraint violations.
 QPU solutions are NOT truly feasible.