

Objective	Outcome
<b>O1,1:</b> <i>Observe how structural metrics progress as software projects evolve.</i>	Established probability distributions of CK metrics and correlation matrices relating metrics to team factors. No clear metric trends against code volume. Clear trends against code revisions.
<b>O1,2:</b> <i>Control for confounding factors.</i>	Ruled out code volume as a confounding factor to the analysis in this research. Controlling for revisions by adopting an approach of bucketing metrics by revision count and team size such that populations with the same revision count are compared to one another.
<b>O1,3:</b> <i>Formulate a definition of the software development team size and analyse the impact of this factor on the structural metrics.</i>	Defining development team size as the cumulative number of committers to commit to a project. Mann-Whitney tests on the bucketed metric populations, and linear regression techniques observing that increasing team sizes yield decreasing measures of inheritance complexity, coupling, cohesion and modularity
<b>O1,4:</b> <i>Deduce the likely result of the impact of team size on the maintainability of software.</i>	Increasing team sizes result in structural metrics that have been associated in prior research with degraded levels of the maintainability sub-attributes of testability, changeability and testability.
<b>O2,1:</b> <i>Identify and mitigate the pitfalls associated with mining software repositories for the purposes of team stability analysis</i>	A challenge to social network analysis in consistently tracking committers as they traverse through the forge as multiple user identifiers are occasionally used by the same committer. Strategy to rationalise to a single identifier. Threat to validity emanating from forked projects distorting VCS log history. Developed a heuristic to searches for common commits across projects, identifying them as related as parent-fork and excluded from study.
<b>O2,2:</b> <i>Formulate a definition of the software development team stability and analyse the impact of this factor on the structural metrics.</i>	Proposal of a calculation to quantify intra-project team stability - a measure capturing the degree of stability accrued by a team through the course of a project. Observing that increasing team stability yield decreasing measures of structural complexity, coupling, cohesion and modularity.
<b>O2,3:</b> <i>Deduce the likely result of the impact of team stability on the maintainability of software.</i>	Analysis indicates that lower team stability causes structural attributes to trend in a direction that is associated with a degradation in the sub-attributes of maintainability.