Projection Models Used by the Office of the Chief Actuary: Perspective on MINT and Microsimulation

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OCACT Cost Projection Models

• Generally mixed macro/micro models for current-law projections
  • Make best use of available data exploiting comparative model strengths
  • Macro models for basic projections of population and economy
  • Micro models where changing distributional factors can be modeled
    • Particularly changing worker earnings histories affecting insured status and benefit level

• “Polisim” used in limited cases for policy proposals
  • One of many “side models” needed to cover a wide range of proposals
  • Expansive full microsimulation model based on vast transitional probabilities
  • Highly complex getting reasonable results given interactions among factors
  • Need for feedback from macro models to benchmark projections
  • Useful in considering some proposals, like child-care credit and drop-out years
    • Makes use of simulated family structures
MINT – Collaborative Relationship

• MINT provides insight into important distributional effects
  • Particularly poverty, as MINT simulates income and assets in addition to earnings
  • Highly useful for exploring family-based effects at micro level
    • Example: retirement earnings test
  • Micro models where changing distributional factors can be modeled
    • Particularly changing worker earnings histories affecting insured status and benefit level

• MINT scaled to Trustees’ projections developed by OCACT
  • Allows for close coordination and collaboration with OCACT cost estimates
  • Provides distributional analysis consistent with Trustees Report projections
  • Provides important additional understanding of proposal effects for policymakers