

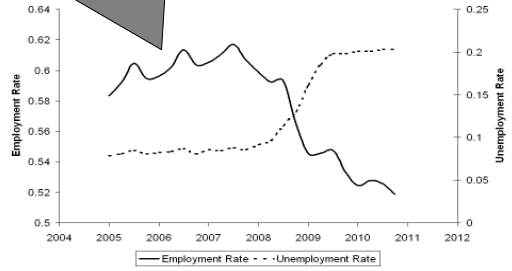
Modelling The Impact of the Economic Downturn on Farm Households

Cathal O'Donoghue
Teagasc Rural Economy and Development Programme (REDP)



The Irish Agriculture and Food Development Authority

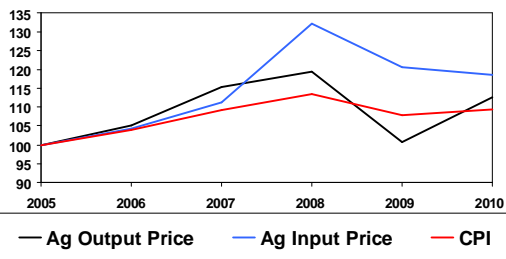
Economic downturn - Lost most of the employment gain of Celtic Tiger
How were Farm Households affected



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Source: CSO

Continued Cost Price Squeeze

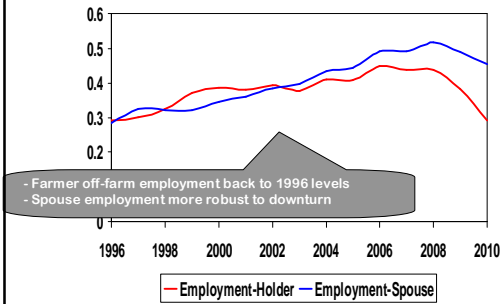


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Source: CSO

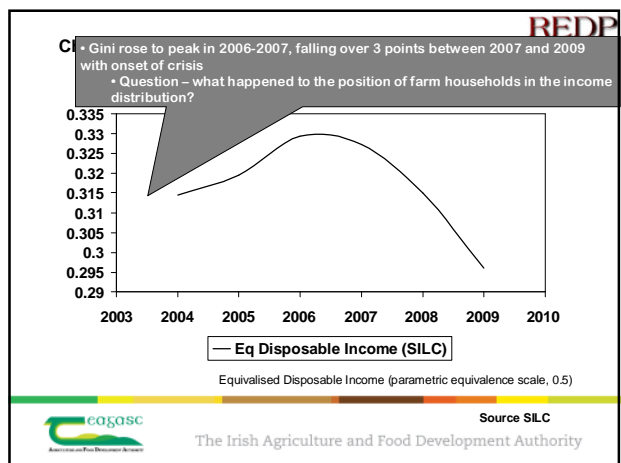
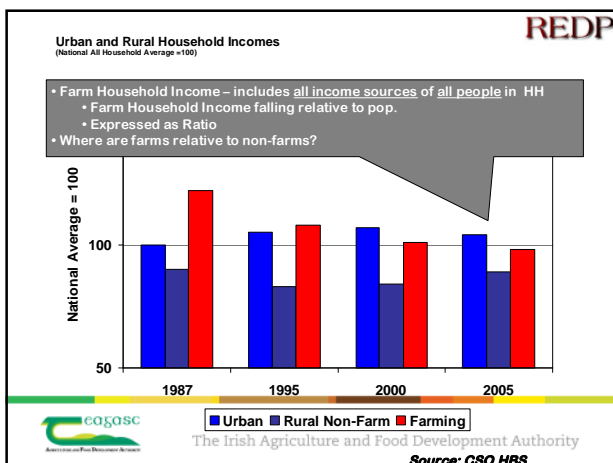
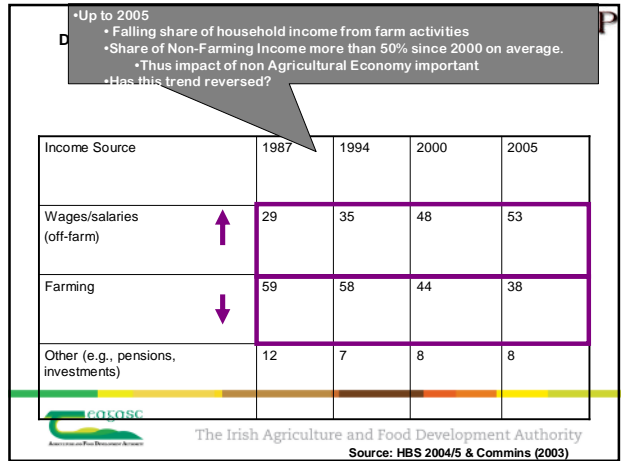
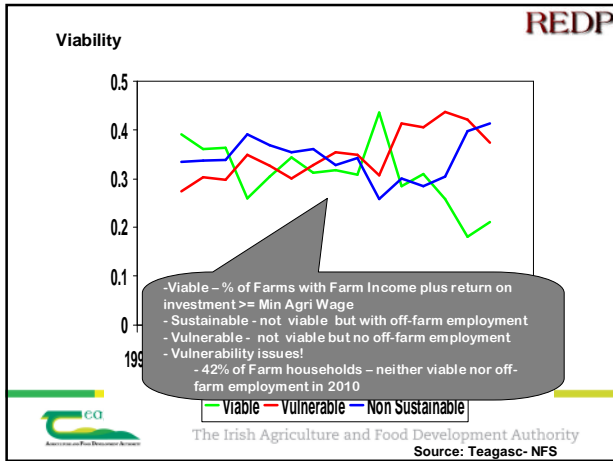
Off-farm Employment

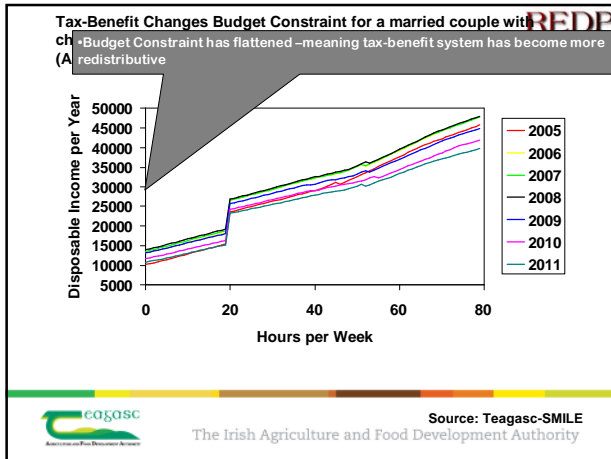
Off-farm Employment [Farmer Couples]



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Source: Teagasc - NFS





- Objective**
- Build an infrastructure to consider the
 - Position of Farm Households within the Income Distribution
 - The impact of current policy and economic changes on Farm Households
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- Issue - Data**
- Farm Incomes
 - National Farm Survey
 - until 2010
 - Household Income
 - SILC
 - limited Agricultural Incomes (in release to researchers)
 - Until 2008 incomes
 - Household Incomes and Expenditures
 - HBS
 - Can link NFS to HBS in 2004
 - Not at individual level – cannot model employment or policy change
 - Solution simulate micro population forward from 2004
 - Use NFS-HBS-SILC matched data
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- Methodology – Statistical Match**
- Data
 - A - NFS Farms in 2004 - 1177
 - B - HBS and NFS 2004 have 574 farm overlaps
 - C - HBS 213 Farms not in NFS
 - D - 623 NFS farms not in HBS
 - Objective – generate HBS with all NFS Farms
 - F – 333 identifiable SILC farms
 - Steps
 - Merge HBS (B) and NFS
 - Statistically Match HBS (C) to NFS
 - E - Remaining 410 NFS farms without a HBS match
 - Statistically Match remaining NFS (E) to HBS
 - Statistically Match HBS-NFS match and Reweight
 - High quality match
 - Matching important in future as HBS no longer using NFS
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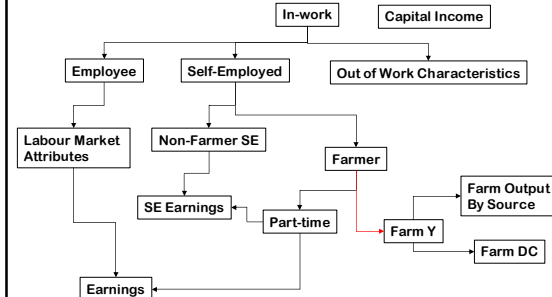
Methodology - Simulation

- Simulate Factors influence the changing distribution of purchasing power resulting from
 - Labour Market Participation,
 - Market Income Inequality,
 - Tax-Benefit Policy,
 - Prices
 - Agricultural Prices and Volumes
- Forward Simulation at household and farm level
 - Simulate income distribution in the absence of data using official statistics based calibration totals



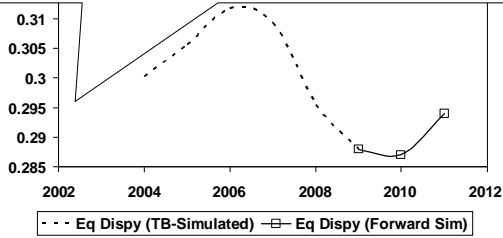
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Income Generation Model



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- Simulated Disposable Income Distribution
 - Model Tax-Benefit System
 - Simulations track actual data to 2008 well
- Start to see inequality rise in 2011 again as we see differential wage inflation particularly in the exporting sectors.



Equivalised Disposable Income (parametric equivalence scale, 0.5)



Source: Teagasc-SMILE
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Farm Simulation Results Hopefully



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Thank You



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