Suggestions for Future Research

Discussion will focus on 2 points

- Comments on the model (IIM)
  - Advantages
  - Limitations/gaps
- Possible improvements/modifications for future research

IIM Advantages

- IIM is economy-wide
  - Can capture direct and indirect (ripple) effects of shocks (disasters/calamities) in the entire economic system
  - Can compute overall cost of damage (impact on GDP)
  - Far better than partial equilibrium models

IIM Limitations/Gaps

- Focuses only on volume flows across sectors
- Does not account for price effects which further limit volume flows. Price effects are important in market economies like the Philippines
- Without price effects overall cost of damage may be underestimated
- Relationships are linear (fixed coefficients); very restrictive; does not allow substitution among available resources
- Disasters occur at specific locations. Philippine IO is a national account, which may not reflect the structure at disaster areas
- Philippine IO is not regularly updated. The 2006 IO coefficients may not reflect current structure of the economy; may not yield good estimates of damage

IIM Limitations/Gaps

- Households (more than 75% of the economy) not formally specified. May not generate enough information to assess differentiated impact on household groups, particularly on poor, which is severely affected by disasters because of very limited resources
- May not generate enough information for policy makers to design targeted interventions to minimize the effects of disasters on poor

Suggestions for Future Research

- Some of the gaps in IO-based analysis may be addressed in an economy-wide, market model - computable general equilibrium (CGE)
- Key features of CGE
  - Upward-sloping supply (supply positively related to price; binding supply constraints)
  - Downward-sloping demand (demand negatively related to price; binding income constraints)
  - Prices adjust to clear markets, i.e. there is a price where demand=supply
  - Economy-wide, captures direct and indirect (ripple) effects
  - Relationships are non-linear. Prices allow substitution among available resources; allow product (quality) differentiation and substitution among products
  - Household groups are specified. Non-homothetic preferences allow differentiation of household groups

Suggestions for Future Research

- Generate enough information to extend disaster assessment analysis to poverty effects using existing household survey data (Family Income and Expenditure Survey)
- Can be calibrated using national data, or village/community level data where disasters occur
- Can be used to design policy interventions during disasters with highest impact, especially on poor
- Can be used in impact evaluation analysis to complement results generated by randomized control trials (RCT)
- Monte Carlo simulations can be conducted to establish confidence intervals of the simulated results